

REFERENCE/HISTORICAL DOCUMENT FOR
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MISSION

The Uniformed Services University of the Health Sciences is the Nation's federal health sciences university and is committed to excellence in military medicine and public health during peace and war. USUHS provides the Nation with health professionals dedicated to career service in the Department of Defense and the United States Public Health Service and with scientists who serve the common good. The University serves the Uniformed Services and the Nation as an outstanding academic health sciences center with a worldwide perspective for education, research, service, and consultation; USUHS is unique in relating these activities to military medicine and military medical readiness.

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I. ACCREDITATION OF THE GRADUATE SCHOOL OF NURSING

"At its December 1996 meeting, the Board of Review for Baccalaureate and Higher Degree Programs evaluated for NLN accreditation the master's degree program offered by the Uniformed Services University of the Health Sciences, Graduate School of Nursing.

Deliberations of the board centered on determining from the school's self-study report submitted by the faculty, the school catalog, the program evaluators' report and recommendations, the extent to which the criteria specified in Criteria for the Evaluation of Baccalaureate and Higher Degree Programs in Nursing, 1991, have been achieved and implemented.

The board voted to grant initial accreditation to the master's degree program in nursing. National League for Nursing initial accreditation of a nursing program is effective as of the date it is granted by the board of review and is retroactive to the 12-month period prior to the date of the accreditation site visit.

The board scheduled the next visit for reaccreditation of the master's degree program in nursing for Fall 2001.

The name of the school will appear on the official list of accredited programs published by the National League for Nursing in the June issue of *N&HC: Perspectives on Community*."

National League for Nursing
Secretary, Board of Review
for Baccalaureate and Higher
Degree Programs
December 30, 1996

BACKGROUND

The USUHS Graduate School of Nursing (GSN) was established in 1992 by Congress. In 1993, USUHS received one million dollars in appropriations for the GSN. In 1994, 1995, and 1996, USUHS annually received two million dollars for the continued operation of the GSN. In February 1996, the GSN was approved by the Assistant Secretary of Defense (Health Affairs) as a funded School of the University. The School's mission is to prepare advanced practice nurses to deliver primary care and services to all eligible beneficiaries during peace, war and other contingencies.

The GSN's faculty and staff are dedicated to providing students with a quality education and to producing graduates who are prepared to deliver health care in a wide variety of settings and communities, both nationally and internationally. The major emphasis is on the nursing perspective of health promotion and disease prevention within the context of primary care.

The GSN's two programs, Family Nurse Practitioner (FNP) and Registered Nurse Anesthesia (RNA), are designed to alleviate shortages of health care providers in the Uniformed Services. Graduates receive the Master of Science in Nursing (MSN) degree and qualify for national certification in their specialties. They are prepared to contribute to the Uniformed Services' peacetime health care delivery systems and to provide military and public health support during combat operations, civil disasters, and humanitarian missions. They may serve in hospitals in the combat zone of a theater of operations under austere and harsh conditions, at sea on ships of war, in isolated areas of the United States, or in other countries where other health care providers may be non-existent.

In April 1994, the RNA program was granted initial accreditation by the Council on Accreditation of Nurse Anesthesia Educational Programs (COA), permitting the admission of students to the program. Eight students, admitted in June 1994, completed 27 months of full time study and graduated in the Fall of 1996. Eleven students were admitted into the program in June 1995 and thirteen were admitted in June of 1996.

Three students were admitted to the FNP program in August 1993, ten in August 1994, seven in 1995, and eight in 1996. The FNP program requires 21 months of full time study; its first two students graduated in May 1995; the second class of ten FNP students graduated in May of 1996. All GSN students must meet pay back requirements as determined by their sponsoring Service or Agency.

GSN STUDENTS

A commitment to the Nation is paramount in an applicant's decision to attend the School. The GSN Admissions Committee makes the final determination regarding student admission to the Graduate School of Nursing. The applicant pool is unique; uniformed officers of the Army, Navy, Air Force and Public Health Service attend the GSN. The membership of the Admissions Committee is different from those at other schools of nursing. In addition to members of the GSN faculty, the committee has representatives from each of the Uniformed Services and faculty from the School of Medicine. The composition of the Committee reflects two critical beliefs of the GSN: 1) the nature of health care, particularly within the Uniformed Services, requires an interdisciplinary approach; and, 2) the Services select candidates for promotion and school attendance on the basis of the "whole person" concept.

The Army, Navy, Air Force, and Public Health Service pre-select and approve candidates for application to the GSN according to Service specific criteria. Once applicants have been selected by their specific Service, they may then apply to the GSN. The Admissions Committee of the GSN reviews the applicants' records not only on the basis of academic merit which evidences that the applicants can succeed in a graduate program, but also on the basis of officership and commitment to their particular Uniformed Service. Academic aptitude must always be balanced against the evidence of future officership and continuing commitment to service in the Army, Navy, Air Force, or Public Health Service since graduates must fulfill a dual role upon graduation. The Grade Point Average for the candidates nominated by the Uniformed Services is between 3.8 and 4.0 in their Baccalaureate Programs, with an average of eight years of experience in the Uniformed Services.

GSN CLINICAL EXPERIENCES

All clinical experiences are under the supervision of the GSN Directors of Clinical Education. In addition, each clinical site has a designated Clinical Coordinator who is responsible for the day-to-day clinical supervision of the GSN students assigned to that site. A description of each site and its GSN relationship follows:

Nurse Anesthesia Clinical Sites

89th Medical Group, Andrews Air Force Base (Malcolm Grow Medical Center)

This hospital is a Joint Commission on Accreditation of Healthcare Organizations (JCAHO) accredited facility which is also accredited by the Council of Accreditation of Nurse Anesthesia Educational Programs as a clinical site for nurse anesthesia students. The medical center has 11 anesthetizing locations where approximately 5,100 anesthetics are administered annually. The attending staff available for preceptoring the GSN students consists of five anesthesiologists and five certified registered nurse anesthetists. The hospital serves not only military members on active duty and their families, but a large population of retired individuals as well. Accordingly, the client base consists of a broad representation of ages from newborn to older adult. A wide variety of surgical procedures and anesthesia techniques are employed at this facility.

Greater Southeast Community Hospital

This JCAHO accredited institution has eight anesthetizing locations where approximately 7,000 anesthetics are administered annually. The clinical staff in the Anesthesia Department consists of eight CRNAs and five anesthesiologists. Located in an economically disadvantaged area of the District of Columbia, the hospital serves a high percentage of minority and historically underserved patients. Accordingly, GSN students are not only exposed to a large volume of surgical procedures that one would expect to see in an institution of this size, but also to a high degree of complexity in healthcare problems associated with the areas served by the hospital. The high percentage of culturally diverse patients with complex and complicated health problems makes this clinical

site particularly important for the teaching of patients regarding health and wellness issues. In addition to the considerable volume of surgical anesthesia available for student learning, the Greater Southeast Community Hospital also provides an active pain management clinic where the GSN Nurse Anesthesia students can assume an active role. This clinic provides the students with opportunities to not only gain clinical experience in regional anesthesia techniques, but to also gain experience in non-invasive, therapeutic modalities useful in the management of a patient's pain.

Washington Hospital Center

This institution is a JCAHO accredited tertiary facility that provides care for all types of patients with all types of health problems. There are 24 anesthetizing locations; and, approximately 15,000 anesthetics are administered annually. The Anesthesia Department is staffed by 40 CRNAs and 15 anesthesiologists. In addition to the normal operating room environment, the Washington Hospital Center also operates the MedStar Trauma Unit where the students are exposed to patients evidencing all manner of life threatening trauma. This clinical site provides extraordinary opportunities for students to develop critical skills in patient assessment and prioritization of therapeutic intervention.

Washington Veterans Administration Medical Center

The Washington Veterans Administration Medical Center is a JCAHO accredited facility with nine anesthetizing locations where 2,200 anesthetics are administered annually. The Anesthesia Department is staffed by three CRNAs and five anesthesiologists. The patients served by this hospital are often elderly, and as a result, present a high level of health problem complexity. A high percentage of surgical anesthetics is performed using regional anesthesia techniques, and accordingly, GSN students are presented with the opportunity of a wealth of clinical experience.

Family Nurse Practitioner Clinical Sites

The FNP Program utilizes a number of clinical settings, both inpatient and outpatient. Inpatient facilities include the following:

Walter Reed Army Medical Center (WRAMC)

A JACHO accredited facility located approximately 20 minutes from the USUHS campus, the Walter Reed Army Medical Center (WRAMC) is the Army's premier medical institution. The hospital offers over 300 beds and maintains numerous specialty clinics. Many of the FNP students utilize WRAMC during their initial health assessment course. Patients are sent to WRAMC from all over the world and present a wide variety of health care needs.

National Naval Medical Center

The National Naval Medical Center, a JCAHO accredited facility, is within walking distance of the USUHS campus. The National Naval Medical Center serves as the "flagship" healthcare institution for the Navy and has a multiservice collaborative breast care center. GSN students in the health assessment course utilize the medical, surgical, pediatric and postpartum units in order to develop history-taking and physical assessment skills.

Veterans Administration Medical Center - Baltimore

The Veterans Administration Medical Center at Baltimore, a JCAHO accredited facility, is located approximately 40 miles from the USUHS campus. Students from both the FNP Program and the RNA Program use this clinical agency for its operative and clinical settings. The Medical Center is staffed with advanced practice nurses in a variety of clinical areas. These advanced practice nurses serve as preceptors and as excellent role models for the GSN students.

Clinical and Private Practices

At present, the GSN utilizes over 12 clinics and private practices in order to provide FNP students with varied clinical experiences. For example, the Zaccheus Clinic, situated in Washington, D.C., furnishes free health care to indigent populations in the Washington, D.C. area. The Zaccheus Clinic, staffed primarily by volunteer health care workers, provides care for numerous geriatric patients. Students in the GSN gerontology course are able to perform histories, diagnose illnesses and treat patients at the Zaccheus Clinic.

GSN ALUMNI

Performance/Evaluation of GSN Graduates

GSN students are educated and practice in a variety of clinical settings. The following methods are used at the conclusion of the program in order to evaluate the graduate's mastery of therapeutic nursing skills: the National Certification Exam; the Clinical Evaluation Form for FNP students; the Clinical Evaluation Form for RNA students; the Program Assessment Questionnaire; the Alumni Survey Items; and, the Employer Survey Items.

National certification exams are a well-established and broadly recognized standard of measurement for clinical competence. These exams reflect the GSN terminal program objectives as well as the ANA Standards of Practice. Data has been and will continue to be collected in order to determine the number of GSN graduates who attain ANA or American Association of Nurse Anesthetists (AANA) certification in their clinical specialties. Results are compared across the graduating classes.

Competency in therapeutic nursing interventions is evidenced among the GSN graduates. Surveys of the GSN alumni reveal that the two 1995 FNP graduates and the ten 1996 FNP graduates who took the Family Nurse Practitioner certification examination were all successful in passing the exam and were ranked in the top percentile for the Nation. The eight RNA graduates who took their AANA certification examination in October of 1996 were also successful in passing their exam. Additionally, five graduating RNA students had their research projects accepted for presentation at the 1996 National Meeting of the American Association of Nurse Anesthetists with one of those five students also receiving the AANA National Student Writing Contest Award for her Master's Thesis and the application of the resulting findings for the improvement of the practice of Nurse Anesthesia in the Uniformed Services.

GSN Response to the Special Needs of the Uniformed Services

The 1995 graduates of the GSN and their employers have indicated that the current GSN curricula and educational experiences were quite relevant to the Uniformed Services' needs for medical readiness. The 1995 GSN graduates recommended the inclusion of procedures for requirements such as suturing, basic laboratory testing, and triage. The GSN faculty elected to incorporate those procedures into the appropriate GSN courses during the 1996 Academic Year. The GSN faculty and administrators are dedicated to continually seek guidance from the Federal Nursing Chiefs, the GSN alumni, and the GSN graduate employers in order to better meet the requirements and special needs of the Uniformed Services.

II. THE SCHOOL OF MEDICINE

CLASS OF 2000

One hundred and sixty-five students were accepted in 1996 to the School of Medicine, The applicant pool increased slightly from 3,238 in 1995 to 3,380 in 1996; there were 20.5 applicants for each position. The demographics of the class are depicted as follows:

- Five students hold Master's Degrees;
- Thirty-two percent majored in biology, 12 percent majored in engineering, and 13 percent majored in chemistry;
- Seventy-six students (46 percent) were associated in some way with the military before USUHS matriculation. Of those,
 - 44 students served previously on active duty in the military (33 as officers and 11 as enlisted);
 - 32 came directly from commissioning programs (14 from service academies and 18 from Reserve Officer Training Corps (ROTC) detachments);
- Forty -six students (28 percent) are women;
- Twenty-eight class members (17 percent) are minority students (including twelve students from groups classified as underrepresented in U.S. medicine).

The percentage of underrepresented minority students has risen from 4.3 percent in 1995 to 7.3 percent in 1996. The number of women matriculants over the past few years has remained in the range of 28-30 percent of the class. Over the past two years, the mean grade point average (GPA) increased from 3.47 to 3.51; and, the Sciences GPA increased from 3.46 to 3.52. During this same time frame, the average Medical College Admission Test (MCAT) score increased slightly, from 30.2 to 30.5.

SOM - CLINICAL EXPERIENCES AT THE TEACHING HOSPITALS

The Association of American Medical Colleges recognizes that teaching hospitals make "essential contributions to the missions of academic medicine by historically providing: the highest quality, most advanced patient care; inpatient and outpatient care training sites for physicians and other health care professions; and, an indispensable venue for scientific discovery and significant research. "

Six of the USUHS-SOM academic departments - Internal Medicine, Surgery, Obstetrics and Gynecology, Pediatrics, Psychiatry, and Neurology - use the Walter Reed Army Medical Center and the National Naval Medical Center as major clinical instructional sites. In addition, students take clerkships at other teaching hospitals affiliated with the USUHS-SOM, such as the Portsmouth Naval Hospital, Malcolm Grow, Wilford Hall, the Keesler and Wright Patterson Air Force Medical Centers, the Tripler Army Medical Center, and the Brooke Army Medical Center. The following teaching hospitals are used for third -year clinical clerkships: the Naval Hospital, Jacksonville, Florida; the Naval Hospital, Pensacola, Florida; the Eglin US. Air Force Medical Center, Florida; the Martin Army Community Hospital, Fort Benning, Georgia; the Eisenhower Army Community Hospital, Fort Gordon, Georgia; the Womack Army Hospital, Fort Bragg, North Carolina; the DeWitt Army Community Hospital, Fort Belvoir, Virginia; and, the David Grant, U.S. Air Force Medical Center, California. **Opportunities to practice teaching skills are considered important to the education of interns and residents at the teaching hospitals for two reasons.** First, much of how one learns to practice medicine goes beyond the textbook presentation; it is acquired from the teaching of experienced clinicians in clinical settings. **Interns and residents must learn to teach colleagues and those junior to them as a part of their professional development. Second, the work required to prepare themselves to teach others provides a special challenge to physicians to expand their knowledge base and transmit that knowledge to others. USUHS medical students receive much of their education in clinical clerkship rotations from housestaff and residents.**

USUHS medical students perform the majority of their third -year clinical clerkships at military hospitals representing all of the military services. As a part of their training and work as medical clerks, USUHS-SOM third and fourth -year students, in a supervised setting, provide patient care-related services in these hospitals during each calendar year. Such services provided include examination of patients, providing post-operative care, organization and maintenance of the completion of the medical history and physical examinations of patients, assistance at surgery and the delivery of newborns, and updating progress notes in patient records.

The current restructuring of the Uniformed Services has been accompanied by new managed care policies and the consolidation of graduate medical education programs into a tri-service structure. This has required the SOM to reconfigure its use of clerkship sites for the third year curriculum in order to ensure proper supervision and educational experiences for students. For example, the diminishing availability of inpatient positions at some sites has been offset by the increased utilization of teaching opportunities in ambulatory settings at those same sites. This has been a very positive trend, as the training of medical students is more closely coupled with the setting where patients are receiving most of their care.

The 1996 - 1997 Academic Year represents the first time that 100 percent of the third -year students will spend equal time on inpatient and ambulatory portions of their 12-week Internal Medicine clerkship. Similarly, the Department of Pediatrics has increased third -year student exposure to ambulatory care, replacing experiences previously offered in neonatal intensive care units.

When movement into the ambulatory setting is not possible, new sites are being developed. Numerous Department of Defense Medical Treatment Facilities across the country serve as resources for student clerkships. During the 1995-1996 academic year, three new sites were established for student education: the Tripler Army Medical Center (Pediatrics and Obstetrics -Gynecology); the Washington Hospital Center (Obstetrics -Gynecology); and, the David Grant Air Force Medical Center (Family Medicine). Planning for the continued expansion of clerkship sites, from an educational as well as a fiscal perspective, is currently under coordinated review by the USUHS/SOM clinical departments and the Office of the Dean.

There is equivalency of educational quality across the clinical sites; all clerkships have been established in conjunction with existing ACGME (Accrediting Council for Graduate Medical Education) accredited residency programs, which establishes a baseline of clinical experience and exposure. Students maintain patient logs during four of the six major clerkships during their junior year. Analysis of log information, although time consuming, has proven to be valuable in examining the educational opportunities for students. In order to facilitate this analysis, work has begun on a program to use an internet site on the USUHS home page on the World Wide Web. Students will be required to record all of their patient contacts by diagnosis, the student year in school, the clerkship site, and whether the patient was seen in clinic or as an inpatient. Beta testing/preliminary evaluation before final implementation of this program will begin in January 1997 at the Walter Reed Army Medical Center.

The Assistant Dean for Clinical Sciences (ADCS) meets with the clerkship directors every six weeks in order to discuss issues relevant to the evaluation of students in the clinical setting and to monitor the evaluation of students across the clinical sites. During these meetings, standards are reviewed for both the written (summative) evaluation of students and the formative feedback sessions that occur during all rotations. Each clerkship director has, in turn, an identified coordinator present at each clerkship site with whom he or she communicates on a regular basis. All end-of-rotation evaluations are reviewed by the ADCS for both content and process issues. **Maintenance of consistent standards is further facilitated through the use of a common evaluation form, which has been developed by seeking collective input from the clerkship directors.**

Jay P. Sanford, M.D., The Founding Dean of the F. Edward Hébert School of Medicine

J. P. Sanford, M.D., a leader in medical education and infectious disease research and the Founding Dean of the F. Edward Hébert School of Medicine, died on October 23, 1996 in Dallas, Texas. A memorial service with military honors was held on November 1, 1996 at the University. Together with Anthony R. Curreri, the University's first President and Mr. David Packard, the first Chairman of the Board of Regents, Dr. Sanford accepted the challenge of creating the Uniformed Services University of the Health Sciences. Under his leadership as the Founding Dean and third President of the University, the USUHS-SOM graduated its first class in 1980. In 1990, upon his departure from USUHS, Dr. Sanford was named Dean Emeritus of the School of Medicine; in 1991, USUHS awarded him the Doctor of Military Medicine Degree, the USUHS Distinguished Service Medal, and the Department of

Defense Distinguished Civilian Service Medal. Doctor Sanford was presented the Medaille D'Honneur du Service de Santa Des Armees, Silver Degree, by the government of France in 1992. Doctor Robert T. Joy, Professor Emeritus, USUHS-SOM, Department of Medical History, and the first Commandant of students, captured the University Community's sincere admiration and sense of great loss over the death of their dear friend and leader with the following quotation: "If ever an institution was the lengthening shadow of a man, it is this University and Jay Sanford. He will always be remembered as our cheerful leader — out front with a grin and a 'follow me, this is fun.'"

SCHOOL OF MEDICINE ALUMNI

The USUHS School of Medicine was mandated by Public Law to graduate "not less than 100 medical students annually, with the first class graduating not later than September 1, 1982." The first SOM class graduated in May 1980 and more than 100 medical students have graduated each year since 1982 for a total of 2,306.

In addition, 444 students have received graduate degrees in the basic medical sciences: Doctor of Philosophy - 162; Master of Science - 35; Master of Public Health - 226; and, Master of Tropical Medicine and Hygiene - 21.

The USUHS-SOM graduates are currently serving in operational, specialty, and leadership positions throughout the Nation and the World. In May 1996, the Chief of the Medical Operations Division for the Department of the Army at Fort Bragg, North Carolina, wrote the following to the USUHS Dean of the School of Medicine: "**The Uniformed Services University of the Health Sciences is now the Army Special Operations Forces' (ARSOF) most important source of physicians. Of 9 positions in the United States Army Special Operations Command (USASOC) opening this summer, 6 are being filled by USUHS graduates. In addition, 3 of 5 senior physicians in ARSOF are graduates of USUHS. The USUHS experiencesets these physicians apart from those acquired through other accession methods and is critical in the mission readiness of ARSOF.**"

Of the USUHS graduates who are currently on active duty and have completed their training, a significant percentage hold leadership or operational positions. The current overall active duty retention rate is 93 percent. The following information on USUHS graduates is provided as general documentation of the ongoing careers of dedicated service to the Nation that are being evidenced by the USUHS-SOM graduates:

Four USUHS-SOM Graduates Work Directly for the President of the United States in Medical Support Positions:

Class of 1991 - Lieutenant Commander Jay Scheiner is serving as flight surgeon to HMX-1, the President's helicopter squadron at Marine Corps Air Facility, Quantico, Virginia.

Class of 1987 - Army Major William Lang has replaced 1985 USUHS graduate Army Lieutenant Colonel Jeffrey Elting in the White House Medical Unit.

Class of 1985 - Commander Rob Darling reported for duty in the White House Medical Unit in September 1996.

Class of 1981 - Navy Captain Connie Mariano is the President's personal physician and heads up the White House Medical Unit.

The Following USUHS-SOM Graduates Have Been Recognized for their Leadership Roles and/or Superior Accomplishments:

Command Flight Surgeon of the Year Awards for 1995

Class of 1993 - Captain Karl M. Larsen is the Air Force Special Operations Command Flight Surgeon of the Year. He is currently assigned to the Department of Flight Surgery at the Royal Air Force Mildenhall, United Kingdom.

Class of 1986 - Major Karen M. Keefer was selected the Air Force Material Command Flight Surgeon of the Year. She is assigned to the Department of Aerospace Medicine at Robins Air Force Base, Georgia.

Class of 1985 - Major Timothy J. Ladner was selected as the Pacific Air Forces Flight Surgeon of the Year. He is stationed at Kadena Air Base, Okinawa, Japan.

Class of 1992 - Major Robert Mazur was named the 1995 U.S. Army Flight Surgeon of the Year by the Association of the U.S. Army. He also received the Flight Surgeon of the Year Award from the Army Aviation Association of America. Dr. Mazur is currently an Emergency Medicine resident at the Madigan Army Medical Center, Tacoma, Washington.

Walter Reed Army Medical Center Interns, Residents and Fellows Graduation Awards

Class of 1991 - Captain Erich Gaertner earned the General Graves B. Erskine Residents Award at the 1996 Walter Reed Army Medical Center graduation ceremony for interns, residents and fellows. This award is presented to the outstanding resident.

Class of 1990 - Major Jennifer Menetrez received the Department of Physical Medicine and Rehabilitation Outstanding Resident Research Award at the Walter Reed Army Medical Center graduation ceremony.

Class of 1986 - Lieutenant Colonel Chris Marino received the Major General Lewis A. Mologne Award at the Walter Reed Army Medical Center graduation ceremony. This award is given each year to a physician in training who **exemplifies the greatest respect for truth, honesty and dedication in the practice of medicine**. Dr. Marino was also selected for promotion to Lieutenant Colonel double-below-the-zone. Currently, Dr. Marino is the Chief of Intraoperative Neurophysiology at the Walter Reed Army Medical Center.

Leadership Positions

Class of 1990 - Major Pat Reinsvold is currently the Chief of Pediatrics at the Army Hospital at Fort Huachuca, Arizona.

Class of 1990 - Major Rob Rush is currently Chief of the General Surgery Service at Fort Huachuca, Arizona.

Class of 1980 - Navy Captain Sandra A. Yerkes is the Chief of Inpatient Psychiatry at the Walter Reed Army Medical Center. Yerkes is in charge of patient treatment, as well as the intern and residency training programs.

Class of 1981 - Navy Captain David Wade, Associate Professor of Clinical Surgery, USUHS, is the Head of the Department of General Surgery at the National Naval Medical Center.

Class of 1982 - Army Lieutenant Colonel Christopher Kaufmann, Assistant Professor of Surgery at USUHS, is the Chairman of the Army Trauma Committee, the American College of Surgeons.

Class of 1982 - Army Lieutenant Colonel David Burris, USUHS Assistant Professor of Surgery, is also the Chief, Division of Surgical Research, Department of Surgery, USUHS-SOM.

Class of 1984 - Air Force Major Darryl C. Hunter is the Chief of Radiology/Oncology at the Keesler Air Force Base, Mississippi. He oversees radiation treatment and clinical research.

Class of 1986 - Air Force Major William Sneider has completed an assignment as Commander of the 4404th Wing (Provisional) Medical Group, Medical Clinic, Dhahran, Saudi Arabia.

Class of 1985 - Air Force Major Kathy Ann LaCivita is Chairman and Program Director for the Department of Endocrinology and Metabolism at the Wilford Hall U.S. Air Force Medical Center, San Antonio, Texas. She is also the Director of the Diabetic Care Clinic and the Endocrine Consultant to the Air Force Surgeon General.

Special Recognition

Class of 1993 - Lieutenant John F. Capacchione received the Navy and Marine Corps Achievement Medal while serving as a medical officer aboard the USS Inchon, a mine countermeasures ship home-ported in Ingleside, Texas. Capacchione responded to a medical emergency on another ship in a shipyard in Pascagoula, Mississippi, directing advanced life support to two badly burned shipyard workers. His prompt response and decisive actions were instrumental in saving the workers' lives.

Class of 1991 - Lieutenant Kenneth Lankin has earned the Navy Commendation Medal for service aboard the USS Whidbey Island from August to September 1994. Lankin is cited for providing quality care for more than 8,100 Cubans during Operation Able Vigil, the U.S. effort to aid people leaving Cuba for the United States. He directed the establishment of a temporary hospital aboard the Whidbey Island and supervised the treatment of Cubans suffering from a wide variety of injuries. He was directly responsible for saving the life of a woman who received open chest and abdominal injuries while adrift on a raft. Lankin was also cited for helping to prepare the ship to receive anticipated casualties during Operation Uphold Democracy, the planned invasion of Haiti.

Class of 1984 - Army Major Lawrence A. Anderson has returned from assignments to Panama where he supported Operation Safe Haven. The operation provided humanitarian assistance to 9,500 Cuban refugees in the Canal Zone from September 1994 to February 1995. Anderson deployed with A Company, 61st Area Support Medical Battalion. As the senior medical officer, he was in charge of four medical aid stations that provided 24-hour coverage. Anderson, along with 24 Panamanian physicians under his supervision, made more than 45,000 outpatient visits.

Class of 1992 - Captain Christian Macedonia, received the COL Robert Skeleton Award given to the outstanding resident in a two-year program at the Madigan Army Medical Center, Tacoma, Washington. Dr. Macedonia also invented and patented a 3-D ultrasound machine, which can be remotely operated by satellite link. The portable machine was successfully field-tested in Bosnia in 1996. Dr. Macedonia is currently an Obstetrics and Gynecology resident at Georgetown University Hospital in Washington, D.C.

Class of 1991 - Lieutenant N. Tony Nieves earned the Navy Achievement Medal while serving at the Naval Hospital in Orlando, Florida. Nieves displayed superb managerial ability as the officer in charge of the Branch Medical Clinic Department. He was instrumental in providing primary medical care to more than 2,000 patients per month at the recruit sick call. Nieves revitalized the Medical Hold Program through weekly liaison meetings between Branch Medical Clinic health care providers and Recruit Training Command medical coordinators. His efforts resulted in medical hold personnel returning to duty two weeks faster than under the previous system.

Class of 1986 - Air Force Lieutenant Colonel Thomas Travis received the Air Force Association's 1995 Paul W. Myers Award for his outstanding contribution to Air Force medicine. He was recognized for his work on the F-22 Fighter Program and an advanced anti-G suit which he co-invented.

Class of 1989 - Army Major Kelly Pridgen had the highest national score on the Emergency Medicine Annual National In-Service Examination. The examination is conducted to evaluate residents from 100 Emergency Medicine training programs in the United States and Canada. Pridgen is a senior Emergency Medicine Resident at the Madigan Army Medical Center, Tacoma, Washington.

Class of 1988 - Army Major Tedd Puckett is assigned to the Ophthalmology Department at Fort Stewart, Georgia. His article on surgical research was published in the March 1995 edition of Ophthalmology.

Class of 1987 - Lieutenant Colonel Bryan Funke, former Commander of the 56th Aerospace Medicine Squadron at Luke Air Force Base, Arizona, is attending Phase I of the Residency Program in Aerospace Medicine at the Harvard School of Public Health.

Class of 1982 - Lieutenant Colonel William Germann has been named a full-time faculty member at the Air Force War College at the Maxwell Air Force Base in Alabama. He is the first physician appointed to a faculty position at the college. He is currently serving as the Medical Chair of the Department of Conflict and Change.

Class of 1992 - Army Major Erin Edgar is in Family Medicine Residency at Fort Bragg, North Carolina, following two-years as a flight surgeon for the Army's 82nd Airborne Division's Aviation Brigade. He was selected for promotion to major, double-below-the-zone.

Class of 1992 - Air Force Captain Brynne Standaert is in Pediatrics Residency at Wright -Patterson Air Force Base, Ohio. Her husband, Rick (also a USUHS 1992 graduate and an Air Force Captain) is completing his Surgery Residency at Wright -Patterson. In 1994, while working through the World Medical Mission, the Standaerts served in the Tenwick Mission Hospital in the Kenya Highlands, caring for the Kipsiji and Musai tribes during a malaria epidemic. While in Kenya, they had the "opportunity" to utilize what they had learned during parasitology instruction at USUHS.

Class of 1981 - Army Lieutenant Colonel Ann Norwood received the William C. Porter Award for outstanding contributions to military psychiatry from the Association of Military Surgeons of the United States (AMSUS).

Class of 1987 - Navy Commander Thomas Grieger received the Nancy C. Roeske Award from the American Psychiatric Association for outstanding contributions to medical student education.

Class of 1990 - Major Liem Mansfield received the 1996 Radiology Society of North America's Roentgen Resident/Fellow Research Award and Research Trainee Prize, and the 1996 MG Byron L. Steger Research Award from the Madigan Army Medical Center. Both awards recognize his radiology research entitled, "Cost-Effectiveness of Screening MR Imaging of the Knee: Prospective Evaluation Of 50 Consecutive Patients." Dr. Mansfield will complete his radiology residency in 1997.

An alumni section has been created on the University's World Wide Web Page, WWW.USUHS.Mil. Information in this section includes special events geared toward the USUHS alumni and a directory of alumni E-Mail addresses in order to encourage electronic communication between the graduating classes, to include direct communication with the University. Data is gathered by the Office of University Affairs in order to document alumni accomplishments, awards, transfers, promotions, and other relevant information.

III. ACADEMIC ACTIVITIES AT USUHS

BOARD OF REGENTS

The USUHS Board of Regents serves in an advisory capacity to the Secretary of Defense through the Assistant Secretary of Defense for Health Affairs for both operations and policy guidance. Three new members of the Board of Regents were nominated by President Clinton on March 12, 1996; they were later approved by the U.S. Senate in June of 1996:

Appointment of the new Chair, USUHS Board of Regents:

Lonnie R. Bristow, M.D., is an internist in private practice from San Pablo, California, and the Immediate Past President of the American Medical Association (AMA). Previously, Dr. Bristow was a Commissioner of the Joint Commission on Accreditation of Health Care Organizations. He also served as Chair of the Board of Trustees of the AMA. Dr. Bristow earned a B.S. Degree from the College of the City of New York and an M.D. Degree from the New York University College of Medicine.

Appointment of new Members to the USUHS Board of Regents:

Robert E. Anderson, M.D., is currently a physician and professor in the Medical School Department of Laboratory Medicine and Pathology at the University of Minnesota. Previously, Dr. Anderson was Chairman of the Scientific Advisory Board of the Armed Forces Institute of Pathology. He earned a B.A. Degree at the College of Wooster and an M.D. Degree at Case-Western Reserve, School of Medicine in Cleveland, Ohio.

Shirley Ledbetter Jones, RN, M.A., is currently a nurse and Colonel in the Arkansas Army National Guard. She is also the Chief Nursing Consultant with the Arkansas Women, Infant and Children Program. Previously, she was the Chief Nurse with the Army Surgeon of the National Guard Bureau in Washington, D.C. and the Assistant Director of the Division of Public Health Nursing in Little Rock, Arkansas. Ms. Jones graduated as a registered nurse from the Arkansas Baptist School of Nursing. She has also earned a B.A. cum laude in Psychology and Sociology at the University of Arkansas and an M.A. Degree in Health Services Administration at Webster University.

Reappointment of a Member to the USUHS Board of Regents:

Everett Alvarez, Jr. of Rockville, Maryland, a distinguished Naval officer and government executive, is best known to the public as the first American aviator shot down over Vietnam. He was taken as a prisoner of war on August 5, 1964 and held in North Vietnam for eight and one-half years until the general release of prisoners on February 12, 1973. Mr. Alvarez has earned a Bachelor of Science Degree in Electrical Engineering, a Master's Degree in Operations Research and Systems Analysis, and a Juris Doctorate Degree. Previously, he has served as the Chair of the USUHS Board of Regents, the Vice President for Government Services with the Hospital Corporation of America, the Deputy Administrator of the Veterans Administration, the Deputy Director of the Peace Corps, and as a program manager with the Naval Air Systems Command.

Other Board of Regents Members:

(Vice Chair) Carol J. Johns, M.D., the Johns Hopkins University SOM, Critical and Pulmonary Care Division, Baltimore, Maryland; John E. Connolly, M.D., Professor, Department of Surgery, UCI Medical Center, the College of Medicine, Orange, California; Alan M. Elkins, M.D., of Portland, Maine; W. Douglas Skelton, M.D., Provost of Medical Affairs, Dean, School of Medicine, Mercer University, Macon, Georgia; and, T. Burton Smith, M.D., of Los Angeles, California.

Ex-Officio Members and Advisors to the USUHS Board of Regents include the following: the President of USUHS; the Assistant Secretary of Defense for Health Affairs; the Deans of the School of Medicine and the Graduate School of Nursing; the Surgeons General of the Army, Navy, Air Force and the Public Health Service; the Commanding General of the North Atlantic Health Services Support Area, Walter Reed Army Medical Center; the Commander of the Walter Reed Army Medical Health Care System;

the Commander of the National Naval Medical Center; the Commander of the Malcolm Grow Medical Center; the Commander of the Wilford Hall Medical Center in San Antonio, Texas; the Commander of the Defense Medical Readiness Training Institute located in Fort Sam Houston, Texas; and, the Military Advisor to the Board, General Thomas Morgan, USMC (Retired) of Fairfax Station, Virginia.

David Packard, First Chairman of the Board of Regents

David Packard, who served as the Uniformed Services University of the Health Sciences' first Chairman of the Board of Regents and acting President, died on March 26, 1996. When the University was created following the passage of the Health Care Revitalization Act of 1972, the U.S. Senate confirmed Mr. Packard as the Chairman of the USUHS Board of Regents, a position he held from May 1973 through October 1982. As Chairman, Mr. Packard orchestrated the immense requirements for designing and building the University complex. He was also instrumental in establishing both the initial membership of the USUHS faculty and staff, and the admissions process for the first class of medical students. Following the untimely death of the school's first President, Dr. Anthony R. Curreri, he was named as acting President of the university. From 1983 to 1990, Mr. Packard was also the Chairman of the Henry M. Jackson Foundation for the Advancement of Military Medicine. The foundation is a private, non-profit organization that supports medical research and education at USUHS and throughout the military medical community. During his career of dedicated service to the Nation, Mr. Packard, served as the Deputy Secretary of Defense from 1969-1971. In recognition of his contributions to military medicine, he received an honorary degree in military medical engineering at the University's graduation ceremony in 1994. It was with great sadness that the University announced the loss of this incredible statesman; Mr. Packard's tremendous accomplishments will always be remembered and appreciated by his USUHS family.

ACCREDITATION

School of Medicine

At its meeting of September 25-26, 1996, the Liaison Committee on Medical Education (LCME) reviewed and accepted the USUHS-SOM report of August 16, 1996 which responded to the following areas: current class size in relation to manpower reductions in the Uniformed Services; the status of federal financial support; continuing progress in curriculum management, evaluation, and reform and, the system and outcomes of monitoring the equivalency of educational quality and student evaluation across sites of clinical teaching. The LCME's written verification specified that the USUHS report was both "clear and detailed." No additional information was requested by the accrediting organization. The next full accreditation survey for the SOM is scheduled for the 1999-2000 Academic Year.

Graduate School of Nursing

As mentioned in Section II of this report, the USUHS Graduate School of Nursing (GSN) was recommended for full accreditation by the National League of Nursing (NLN) Site Visit Team on November 8, 1996. Formal accreditation was approved for a maximum period of five years by the NLN on December 19, 1996. The President of USUHS, the Founding Dean of the GSN, and the GSN faculty and staff were acknowledged for their substantial effort which led to the completion of the GSN Self Study which was recognized by the NLN as "stand-alone documentation" of the successful establishment of the Nation's first Graduate School of Nursing for the Uniformed Services.

Continuing Education for Health Professionals (CHE)

Under Title 10, U.S. Code (Section 2113), USUHS is mandated by Congress to "establish programs in continuing medical education for military members of the health professions to the end that high standards of health care may be maintained within the military medical services." The Office of Continuing Education for Health Professionals (CHE) is also responsible for the acquisition and maintenance of USUHS CHE accreditation and of trauma and resuscitative medicine training program affiliations. USUHS has

received the maximum of six years accreditation by the Accreditation Council for Continuing Medical Education (see Section V of this report for a detailed description of the USUHS Office of CHE).

Tropical Medicine

The American Society of Tropical Medicine and Hygiene sponsors the examinations leading to a Certificate in Clinical Tropical Medicine and Travelers Health. Prerequisites are the completion of a society-approved course of study in tropical medicine and two months overseas clinical experience. In the United States there are only seven institutions currently approved for the course work in tropical medicine. The USUHS-SOM Department of Preventive Medicine and Biometrics has the distinction of being one of those seven accredited resources approved for course work in tropical medicine.

RESEARCH

The American military medical community has a long tradition of involvement with significant laboratory, clinical, and public health research, which in turn, has yielded an impressive and growing list of laboratory and clinical advances. Military medicine and the USUHS continue to provide research leaders who are dedicated to the resolution of biomedical questions in areas of high relevance to the Department of Defense health mission, such as in combat casualty care, military infectious diseases, and military operational medicine.

In 1996, the position of Vice President for Research was established in order to develop, establish, and direct a University coordinated, creative and forward-looking program to facilitate the research activities of the faculty. Responsibilities of the new office include representing the interests of both the School of Medicine and Graduate School of Nursing (GSN) faculties and students in biomedical and educational research, providing oversight for the Office of Research Administration, ensuring responsiveness to faculty and student research needs, sponsoring conferences to improve research and grant applications, promoting and implementing the program for technology transfer, and representing the research aspects of the faculty at professional meetings and at other universities.

- SCHOOL OF MEDICINE RESEARCH ACTIVITIES

The SOM faculty continues to pursue research in a rich variety of scientific areas, including basic biomedical questions of high relevance to the Department of Defense health mission, such as in combat casualty care, infectious diseases, operational medicine, and factors which affect military performance, and responses to the stresses of military life. The overall quality of this research is evidenced by the successful competition of the faculty for research funding from numerous federal agencies, including the National Institutes of Health, the National Science Foundation, and other agencies, private companies, voluntary societies, and private foundations. Currently, the SOM has more than 425 research projects underway.

Research contributed by USUHS scientists relating to combat casualty care continues to provide rapid diagnostic methods and treatments which ensure military readiness, excellent care for deployed fighting forces, and the rapid return of the injured and sick to active duty. Combat casualty care research at the USUHS focuses on such issues as blood preservation and supply, wound healing and sepsis, nerve injury and healing, treatment of traumatic injury, and in understanding and preventing endotoxic shock.

Traumatic brain injury accounts for forty percent of deaths and at least fourteen percent of surviving casualties in combat. The Defense Veterans Head Injury Program (DVHIP) at USUHS is designed to ensure that all military and Department of Veterans Affairs traumatic brain injury patients receive an evaluation specific for traumatic brain injury. The DVHIP program integrates clinical research with patient care comparing relative efficacy and cost of rehabilitation strategies based on standardized neurological, psychiatric, rehabilitation, cognitive and psychosocial evaluations.

The USUHS Casualty Care Research Center scientifically evaluates current casualty care concepts and practices and then uses the information obtained to provide effective specialized training in the field management of medical and surgical emergencies. In

support of telemedicine, the Center integrates clinical teams from the University and the U.S. Army Medical Research and Materiel Command in order to provide medical consultations to remote sites (see page 30 for further discussion on the Center).

Vaccines have played an important role in the eradication of certain infectious diseases, and are indispensable for the protection of the fighting forces deployed throughout the world. Scientists at the Uniformed Services University have been actively involved in the advancement of vaccine technology. **One new vaccine construct that USUHS scientists have developed covalently couples a large polysaccharide carrier to derived antigenic proteins or peptides, to which the body reacts in the process of building its host defenses against such agents.**

Recent technological advances have made it possible to predict malaria mosquito population levels and disease transmission risk within precise areas and time frames. **Through satellite imaging and remote sensing (the use of light, heat, or microwaves to detect and measure characteristics of an object or area without being in physical contact) researchers at the USUHS are able to assist other nations with predictions of high-risk locations for malaria occurrence thereby focusing disease control operations and saving scarce financial and human resources.**

Research provided by USUHS-SOM faculty targets many disease-causing agents of high military relevance for troop deployment and sustainment. These include plasmodium, shigella, enterohemorrhagic E. coli, gonococcus, pneumococcus, brucella, hepatitis, and Venezuelan equine encephalitis. Some of these efforts are related to understanding the basic biology and the virulence of infectious agents, while others address issues of host response or the development of new vaccine technologies.

The Centers for Preventive Medicine and Public Health, a consortial entity within the Department of Preventive Medicine and Biometrics, combine broad expertise in research related to clinical and preventive medicine and public health with education and service. The research of the component centers of this consortium involves the following: 1) comprehensive analytical research programs on effectiveness and efficiency in health care delivery; 2) short-term and long-term health risks associated with working in isolated and/or extreme environments; 3) relationships between environmental parameters and human health; 4) the role of preventive medicine and public health in the tropics and in developing regions of the world; 5) prevention and treatment of substance-related disorders; and 6) the effects of environmental and occupational health care (see page 29 for further discussion on the Centers).

The research contributed by the SOM faculty has achieved national and international praise for both its sophistication and applicability to the special needs of the Uniformed Services. For example, the faculty members of the Department of Surgery have been actively engaged in Advanced Research Projects Agency (ARPA) programs related to the development of information and telerobotics systems for the care of the injured. Also, the USUHS Center for Prostate Disease Research (CPDR) was established by the faculty of the Department of Surgery. Since 1992, the USUHS SOM Department of Surgery has served as the Main Office and Basic Science Research Center for the DoD prostate disease research activities. The CPDR is now funded at over \$17 million. The CPDR team, a model for research collaboration between clinical, basic, epidemiologic and pathology researchers, has had recent publications in prominent journals such as the Journal of the American Medical Association (JAMA) and the New England Journal of Medicine (NEJM). In August and September of 1996, ABC World News Tonight, CNN and other media outlets interviewed LTC Judd W. Moul, MC, USA, SOM Associate Professor of Surgery and his colleagues about their lead article in the 1 August 1996 New England Journal of Medicine regarding PSA testing in African American military health care beneficiaries.

Another example of the contributions of the USUHS faculty was the USUHS forum on the Health of Women in the Military. Increasing numbers of women are serving as active duty and reserve members of the U.S. Armed Forces. As their numbers increase, issues related to the performance, fitness, and health of these women become increasingly important to military readiness. Congress directed a funding initiative, the Defense Women's Health Research Program, to address the health of military women, especially as their health relates to mission readiness, deployment, and training. The Department of Defense organization with responsibility for the program, the Army Medical Research and Materiel Command, commissioned the Institute of Medicine (IOM) to collect published data and information on ongoing research on topics of relevance to the health of women in the military. This project led to the publication of a comprehensive bibliography of published articles, indexed by subject, along with a disk format of these publications. USUHS received a grant from the Defense Women's Health Research Program to fund a conference in order to discuss some of the information in the IOM report and to propagate these data to the larger community. Prior to the actual conference, which was held

at USUHS on 17-19 June 1996, articles were commissioned on the topics to be discussed. These articles were distributed to the meeting participants prior to the conference and served as background for the presentations and discussions occurring at the meeting. Participants of the conference included military and civilian sector scientists and clinicians with expertise in the addressed areas, along with active duty women and those involved in policy development. The four subject areas discussed were: 1) Environmental Stressors and Military Women; 2) Obstetric and Gynecologic Issues in Military Environments; 3) Women and Family Issues; and, 4) Diet and Fitness and Performance. The conference was presented through the collaboration of the following USUHS activities and Departments: The Graduate School of Nursing; the Office of the Vice President for Research, the School of Medicine Departments of Preventive Medicine and Biometrics, Psychiatry, Obstetrics and Gynecology, and Family Medicine; the Office of Continuing Education for Health Professionals; and, the Office of Medical Education.

During the last two calendar years, the SOM has successfully recruited faculty members with national prominence for work in their areas of expertise, and anticipates that the research productivity level of the SOM faculty will continue to increase.

Examples of USUHS-SOM Faculty and Departments That Have Received Special Recognition for Academic Achievement:

- In 1996, USUHS was selected by the Department of Defense as the academic center for the Tri-Service Tropical Medicine Course.
- The American Academy of Otolaryngology -Head and Neck Surgery Award was presented to Major William Bolger, USAF, MC, USUHS Assistant Professor of Surgery on September 29, 1996, at the Washington, D.C. Convention Center;
- The USUHS-SOM Department of Surgery was chosen to host the 57th Annual Meeting of the Society of University Surgeons during February of 1996; USUHS is one of approximately forty medical schools in the United States to have been afforded the distinction of hosting this annual conference.
- The 1996 "prostate Educator of the Year" award for the Mid-Atlantic Region was presented to LTC Judd W. Moul, MC, USA, SOM Associate Professor of Surgery by the American Foundation for Urologic Disease.
- The American College of Psychiatrists honored Robert Ursano, M.D., SOM Professor and Chair of Psychiatry, by appointing him as a Fellow in the American College of Psychiatrists (the College membership is limited to 1,000).
- The American College of Psychoneuropharmacology(ACNP) honored Harvey Pollard, M.D., Ph.D., SOM Professor and Chair of Anatomy and Cell Biology, by electing him for membership (total ACNP membership is 560).
- The American Association for the Advancement of Science (AAAS) presented the Newcombe-Cleveland Prize to Christopher Broder, Ph.D, SOM Assistant Professor of Microbiology.

Federal Technology Transfer Program at USUHS

The USUHS has been an early advocate of the Federal Technology Transfer Program. The USUHS-SOM has distinguished itself in medical biotechnology research by achieving the unique distinction of having almost 100 percent of its patent portfolio under license.

Research Collaboration with the Medical Treatment Facilities

Many uniformed and civilian faculty of the USUHS-SOM who are on staff in the school's affiliated teaching hospitals consistently demonstrate an ongoing commitment to research. For example, USUHS faculty members make up a substantial proportion

of the principal and associate investigators on numerous research protocols initiated at the Walter Reed Army Medical Center during the past few years, to include the congressionally mandated and funded closed-head injury and spinal cord injury programs. Most of these studies were on human subjects and a number were based on participants in collaborative group studies. Similar programs of varying size exist at the other major teaching hospitals. A number of USUHS-SOM faculty are located at the Walter Reed Army Institute of Research, the Armed Forces Radiobiology Research Institute, the Naval Medical Research Institute and the National Institutes of Health.

- GRADUATE SCHOOL OF NURSING RESEARCH ACTIVITIES

The Graduate School of Nursing (GSN) faculty and student research and scholarship activities address the military health care priorities as identified in the "Tri-Service Research Priorities " as well as those research priority areas identified by the National Institute of Nursing Research. Examples of topics addressed by the faculty include: the evaluation of patient outcomes in specific patient populations, e.g., diabetes; predictors of abuse in military families; prenatal care; the role of the nurse practitioner; and, nursing education outcomes. Topics addressed by current students include the following examples: health promotion; weight management; smoking cessation; instructional modalities for regional anesthetics; self-efficacy in diabetes management; acute pain management clinics in military settings; and, parental presence during anesthesia induction.

CURRICULUM EVALUATION AND DEVELOPMENT AT USUHS

- SCHOOL OF MEDICINE CURRICULUM DEVELOPMENT

The SOM Curriculum Committee was charged by the Dean of the School of Medicine in September 1994 to review the frequency and scheduling of examinations. The Committee worked with course directors and department chairpersons to examine the issue. Faculty were encouraged by the Committee to consider a reduction in the frequency of examinations as the course schedules were developed for the current academic year. Faculty response to this request was positive and course directors took an active role in reviewing course structure and possible changes to the scheduling of examinations. The result of this coordinating effort is that the number of examinations in the first two years of the curriculum has been reduced by approximately nine percent for the 1996-97 Academic Year. In response to the recommendation of the Liaison Committee on Medical Education (LCME), and following a comprehensive, three -year review of the SOM four-year curriculum by the faculty and the Office of the Dean, the 1996 schedule of SOM courses, which includes additional time for self-study, represents a 10 percent reduction in contact hours from the 1995 Academic Year.

- THE ESTABLISHMENT OF THE SOM OFFICE OF EDUCATIONAL AFFAIRS

The Office of Educational Affairs was reviewed by the USUHS Board of Regents and established by the Dean, SOM during Fiscal Year 1996. The mission of the USUHS-SOM is unique among medical universities because it requires the assimilation of two distinct disciplines: medicine and military science. At USUHS each element of its educational programs must be analyzed in the context of its contribution to the assimilation of the two disciplines. This created a need for an administrative infrastructure capable of transcending traditional departmental and divisional lines in order to ensure the attainment of a unified perspective. The Office of Educational Affairs was established in order to meet that requirement.

During Fiscal Year 1996, the Offices of Graduate Medical Education (GME), Clinical Affiliates, and Medical Education were integrated into a single functional unit under the administrative direction of the Director, Office of Educational Affairs. The functions of those three offices were absorbed by the Office of Educational Affairs to include additional areas of joint responsibility: 1) Oversight for medical curriculum review and development; 2) Coordination and the provision of guidance for faculty development programs; 3) Assessment and coordination of current military medical education and training; and, 4) the promotion of educational research.

Oversight for Medical Curriculum Review and Development: The Office of Educational Affairs was established in order to monitor and assist the Standing Institutional Committees which are designated by the Dean, SOM. The Standing Committees have been carefully constructed over the years in order to provide oversight throughout the academic and administrative requirements for the School of Medicine. The new office will provide a forum for communication and oversight in concert with the Committees and the Dean, SOM. It is also envisioned that the Office of Educational Affairs will facilitate interdepartmental communication and provide guidance and assistance in the design, development, and implementation of interdepartmental collaborative initiatives.

Coordination and the Provision of Guidance for Faculty Development Programs: The Office of Educational Affairs has also been tasked to provide the following assistance to the Dean, SOM: 1) document and catalogue current initiatives in faculty development; 2) create and maintain a database of available assets; 3) assess intramural and extramural needs; 4) provide assistance and guidance for program development.

Analysis and Oversight Requirements for Military Medical Education and Training: The Office of Educational Affairs will also play a significant role in the analysis and oversight requirements for the unique military education and training which is embedded in the USUHS SOM curriculum. The new office has been tasked with the following: 1) define the needs and validate goals in cooperation with the Services; 2) review the current status of the curriculum in the context of validated objectives; 3) **codify the military curriculum in order to promote efficiency and to ensure uniformity**; 4) promote an interdisciplinary approach by identifying opportunities for interdepartmental collaboration; and, 5) **evaluate effectiveness with outcomes research**.

Coordination with the Defense Medical Readiness Training Institute: The Defense Medical Readiness Training Institute (DMRTI) was formally established by the Assistant Secretary of Defense for Health Affairs on June 6, 1996. The mission of DMRTI is twofold 1) to provide high quality, reality -based learning opportunities for the joint services; and, 2) to attain a high state of joint medical readiness. **Since its inception, DMRTI's strategic planning requirements have been coordinated and strategized with both the President of USUHS and the Office of Educational Affairs.**

Support for Educational Research: Finally, the Office of Educational Affairs has been established to provide the following support for educational research at the SOM: 1) create and maintain database(s) necessary for the valid assessment of outcomes of medical and military education; 2) design, conduct and evaluate projects; and, 3) investigate and evaluate emerging technology and techniques.

- GRADUATE SCHOOL OF NURSING CURRICULUM DEVELOPMENT

The primary concepts of nursing have been incorporated into and form the foundation of the graduate nursing curricula of the USUHS Graduate School of Nursing (GSN). The GSN faculty and staff believe that the placement of the GSN within the interdisciplinary boundaries of the USUHS is a distinct strength. This environment offers a unique blend of interactive didactic and clinical experiences which support the preparation of competent advanced practice nurses for service during the adverse conditions of international conflict, and in peacetime when humanitarian services and disaster relief are required.

Overall, the USUHS-GSN curricula were developed using the Master's Essentials Model approved by the American Association of Colleges of Nursing (AACN) membership in March 1996. Specifically, the GSN faculty has adopted the "Model Program Standards for Nurse Practitioner Programs" established by the National Organization of Nurse Practitioner Faculties in March 1996, and the Standards of the American Association of Nurse Anesthetists as the GSN standards for educating students in its Family Nurse Practitioner and the Nurse Anesthesia Programs. Because the existence of the national standards is evident both in the established levels of achievement and in the final goal objectives of the GSN programs, the 1996 national curricular standards of nursing are viewed as the foundation of the GSN's advanced practice nursing programs.

Upon matriculation to the GSN, students are licensed and possess an average of eight years of practice, a baccalaureate preparation in nursing, and a common academic foundation. **The GSN is a unique school that is mandated to educate advanced practice nurses to meet the needs of the Uniformed Services.** One example of the unique experience offered by the GSN programs

is its participation in the National Health Service Corps Faculty Advocate/Mentor Network Project. This project serves as a conduit for faculty advocates, minority mentors, and designated practice sites in order to assist students as they work in medically underserved regions. Through a special project spearheaded by the American Association of Colleges of Nursing, the participating GSN faculty member has received special preparation to work with both the network and with culturally diverse students. In addition, the entire GSN faculty has access to extensive materials developed by the United States Public Health Service on cultural sensitivity. Relevant material has been integrated into the curricula in order to help students recognize how to present care to culturally diverse populations.

The master's curricula offered by the GSN extends the knowledge base derived from nursing, the humanities and the physical, biological, and behavioral sciences which have been acquired following the completion of a baccalaureate program in nursing. Building upon the GSN students' baccalaureate education, the GSN curricula prepares competent nursing professionals who are prepared to: 1) assume positions of leadership within areas of specialization; 2) contribute to nursing scholarship; 3) conduct and evaluate research on expanded nursing roles in clinical practice; 4) conduct and evaluate research in the management of the health/illness continuum; 5) assume leadership roles within the Uniformed Services; and, 6) promote advanced practice nursing within the Uniformed Services.

The USUHS Graduate School of Nursing is unique among the Nation's nursing programs because it must educate students to treat and care for both civilian and military personnel, in peace, war, disaster, or other situations under austere conditions. The GSN curricula are driven by special requirements in meeting the missions of the Department of Defense. Continuous consultation has taken place with the Federal Nursing Chiefs (Army, Navy, Air Force and Public Health Service) during the development of the GSN curricula in order to assure that the special needs of the Uniformed Services are being met by the GSN graduates. For example, in concurrence with the Federal Nursing Chiefs' indications that the career advancement of their officers would be enhanced through the completion of a master's thesis, the GSN examined the feasibility of the completion of a thesis within the time constraints of its programs. Based on the assessment of multiple program components, including an assessment of the graduating students' research projects and faculty expertise, a master's thesis, which would become an extension of the charter students' research projects, was made a requirement for all graduating students, beginning with the graduating class of 1996. **Additionally, in response to the Federal Nursing Chiefs' recommendations for the inclusion of military procedures during evacuation and the care of wounded or sick individuals when large numbers of critically ill patients would be air transported back to the United States, GSN students participated in a mock air lift and medical treatment during their flight experience in the Spring of 1996.**

The GSN is committed to meeting the special needs of the Uniformed Services. Outcome evaluations have been designed and implemented for the graduating students, the GSN alumni, and the Uniformed Services "employers." During the 1995-1996 timeframe, the GSN Evaluation Committee to the GSN administration recommended the continuation of the GSN emphasis on specific aspects of the GSN curricula, such as clinical case studies, clinical correlations, and extensive clinical practicums. This process was based on the **1995 through 1996 outcome evaluations from the Services ("employers" of the GSN graduates) which had an overall average of 6.85 out of a possible score of 7.0.**

THE USUHS OFFICE OF MINORITY AFFAIRS

The USUHS Office of Minority Affairs was established in 1991; its mission is to increase the participation and advancement of traditionally underrepresented minority and women students, faculty and staff at the University. The Office of Minority Affairs, under the leadership of the Vice President for Minority Affairs, has made considerable progress toward establishing programs that will lead to the successful participation of USUHS in the Association of American Medical Colleges (AAMC) Project 3000 by 2000. Examples of such programs are:

- Monthly recruitment trips to career fairs at undergraduate institutions, national and regional meetings;
- Six-week Prematriculation Programs for the academic enhancement of new matriculants to the USUHS-SOM have been held since 1992; eight students participated in the summer program for 1996;

Academic Activities at USUHS

- A ten-week summer laboratory internship for undergraduate sophomores and juniors was piloted by USUHS in 1993 and has continued through 1996. This internship serves as an enrichment program and exposes students to careers in the basic sciences. The 1996 program sponsored fourteen students;
- The USUHS Office of Minority Affairs has also participated in a grant obtained through the Bureau of Disadvantaged Assistance of the Health Resources and Services Administration of the United States Public Health Service. This grant supports the FERM-UP Program (Facilitating the Entry and Retention of Medical Uniformed Professionals) at USUHS. The program provides a mechanism for expanding the pipeline of underrepresented minority students entering careers in medicine. Fifty students participated in this program at USUHS during the summer of 1996;
- The Student National Medical Association (SNMA) meets monthly to discuss issues facing minorities in uniformed medicine. The SNMA has several ongoing community projects:
- Monthly meetings at the Birney Elementary School (Southeast, Washington, D.C.) to present current topics in science and health and to provide role models for minority students;
- Helping Hands Project - USUHS Students and Faculty staff a clinic for the medically underserved in Takoma Park under the auspices of the Mobile Medical Care, Inc.

The USUHS Office of Minority Affairs has established an aggressive program for the recruitment of underrepresented minority students and is constantly seeking creative approaches in order to increase such representation at the University. The Office also sponsors a successful Mentorship Program through which matriculating students are assigned to USUHS-SOM faculty members on an individual basis. The President of USUHS, in coordination with the Office of Minority Affairs and the USUHS Civilian and Military Personnel Offices, maintains explicit recruitment procedures at the University for both civilian and military personnel in order to ensure the representation of underrepresented minorities throughout the various schools, programs, and administrative areas of the USUHS.

V. OTHER PRODUCTS OR SERVICES OF USUHS

GRADUATE EDUCATION IN THE BASIC MEDICAL SCIENCES

The Graduate Education Program in the Basic Medical Sciences is an integral and vital component of the USUHS-SOM. The Office of the Associate Dean for Graduate Education is responsible for the overall administration of the graduate programs and the processing of all applications for graduate study. The Graduate Program in the Biomedical Sciences has grown steadily since the first graduate students were admitted in 1977. Presently, there are 111 graduate students enrolled in Doctoral and Master's programs in the basic medical sciences. The graduate programs of the SOM offer training leading to the Doctor of Philosophy Degrees in the following disciplines: Anatomy & Cell Biology; Biochemistry; Medical Psychology; Clinical Psychology (military only); Microbiology & Immunology; Molecular & Cell Biology; Neuroscience; Pathology; Pharmacology; Physiology; Medical Zoology; and, Public Health. Master's Degrees are offered in Public Health, Tropical Medicine & Hygiene; and, Military Medical History (military only).

Graduate students at USUHS are individuals who have completed a baccalaureate degree and are admitted to programs of study leading to an appropriate Master's Degree or the Doctor of Philosophy Degree. Master's Degree students must complete a minimum of 48 credit hours of academic work and maintain full-time graduate study for a minimum of 12 months; a written thesis is required for the Master of Science Degree. Ph.D. students must complete 144 credit hours of academic work, maintain full-time graduate study for a minimum of 36 months, and prepare and defend a dissertation based on original experimental research in one of the basic medical sciences. Most students require 4–5 years in order to complete the requirements for a Ph.D. Degree. **Besides being obligated to participate on a full-time basis, all graduate students are obligated to assist in teaching and research programs that are integral components of the graduate education program in which they are enrolled.**

SOM Accreditation Mandates the Need for Graduate Education

The body responsible for the accreditation of programs in medical education leading to the M.D. Degree in the United States is the Liaison Committee on Medical Education (LCME). The parent organizations for the LCME are the American Medical Association and the Association of American Medical Colleges. The LCME requires medical schools to be actively involved with research and graduate education in the basic medical sciences.

The LCME considers it vital for the education of medical students that each school provide, or be affiliated with institutions that provide, programs in graduate medical education (residencies) and that the faculty of each school actively contributes to the development and transmission of new knowledge A medical school must also contribute to the advancement of knowledge and to the intellectual growth of its students and faculty through scholarly activity, including research ...

Other educational programs conducted by medical schools or their affiliated institutions that contribute to an enriched environment for undergraduate medical education include postdoctoral fellowships, graduate education in the basic medical sciences, continuing education for physicians, and education in other health professions and allied health occupations. While graduate medical education is crucial for the teaching of clinical medicine, postdoctoral fellowships in the biomedical sciences and in the clinical subspecialties contribute to the advancement of knowledge and the development of future physician faculty members. Future faculty members and investigators in the basic medical sciences are developed through programs in graduate education leading to the Master of Science, Doctor of Philosophy, or Doctor of Science Degrees ..." (FUNCTIONS AND STRUCTURE OF A MEDICAL SCHOOL, LCME document on accreditation standards).

The graduate programs in the basic medical sciences at USUHS benefit the SOM and the Department of Defense in the following ways: 1) Graduate programs help to create an environment in which faculty members integrate teaching with research at the cutting edge of scientific inquiry. Medical school faculties in the basic sciences consist of individuals who are trained as educators and researchers. Without the opportunity to pursue research and to teach advanced graduate students as well as medical students, many outstanding scientist/educators would not accept faculty appointments in the SOM or remain on the faculty. Graduate Education programs play an important role, therefore, in enabling USUHS to recruit a highly qualified faculty and to establish and maintain standards for academic and scholarly excellence that are comparable with those at other recognized medical schools in the

United States. USUHS is the only federal medical school in the United States, as such, it must achieve the highest academic standards; 2) Teaching of laboratory and other small group sessions for medical students is labor intensive and requires large numbers of instructors. Graduate students assist the faculty in these activities and serve as teaching and research assistants. Such service is a requirement of their educational programs in the Basic Sciences departments at USUHS. Through formal and informal interactions with their graduate student colleagues, medical students are exposed to the disciplined methods of critical scientific inquiry that form the rational basis of problem -solving in medical science; 3) **Graduate programs at the USUHS provide educational opportunities (an example of USUHS-generated cost-avoidance to DoD) for qualified active duty officers of the Uniformed Services who receive authorization to participate under the sponsorship of their parent services. Most of these officers will complete careers in their parent services and use their advanced training in assignments that fulfill specific missions of the Uniformed Services.** Some of these individuals will be qualified to return to USUHS as faculty members in the Basic Sciences departments. They are scientist/educators who will understand basic science as well as the role of officers in the Uniformed Services and who will also serve as exceptional role models within the Services.

A specific example of the USUHS Graduate Education Program's direct response to the needs of the Defense Health System is the creation of the new program for the Masters in Military Medical History. This program is an outgrowth of the Fellowship in Military Medical History established at USUHS in 1983 in order to train instructors of history for the United States Army Academy of the Health Sciences. The excellent work of the officers who completed the fellowship program led to the request by the Medical Service Corps of the Army to establish a degree granting program so that the officers could continue to be used for lessons learned and history education assignments as teachers at the Army Academy. The program of study is currently limited to officers in the Medical Service Corps of the Army and includes additional obligated service as per Army regulations.

GRADUATE MEDICAL EDUCATION

As discussed in Section IV of this report, the Office of Graduate Medical Education was integrated into the Office of Educational Affairs during Fiscal Year 1996; however, this reorganization has not effected the support and consultation for graduate medical education which continues to be provided to the Uniformed Services by the USUHS.

The SOM Office of Graduate Medical Education (GME) was established in 1986 in order to provide Consultation on GME programs (internship, residency and fellowship training for physicians) for program directors and the Office of the Assistant Secretary of Defense for Health Affairs (OASD/HA). Since 1986, USUHS GME has expanded to provide DoD-wide consultation and oversight for 11 USUHS-SOM sponsored or cosponsored GME programs. The USUHS-SOM Office of GME is also involved in the National Capital Military Medical Education Consortium which generates additional GME-related taskings from OASD/HA. The following areas of responsibilities have been assigned to the USUHS GME program:

- Sponsor or cosponsor selected GME programs;
- Continue to be the academic affiliate for many GME programs especially in the development of qualified uniformed GME physician faculty for all of the Services;
- Expand consultative services to insure that accreditation is not jeopardized when DoD GME programs are integrated;
- Continue to participate in the continued OASD/HA implementation of its overall plan to select qualified program directors, to provide consultative support in the ongoing selection and evaluation of GME program faculty, and to support the development of an intra -DoD resident matching system;
- Coordinate with the implementation of a plan to collect and evaluate data and information on DoD GME programs in order to ensure academic and scientific excellence;
- Continue significant and critical support to military GME programs in the National Capital Region (NCR) through faculty supervision of trainees, support for the Residency Review Committee (RRC), mandated research, curriculum enhancement, faculty development, and direct patient care; and,
- Advise on militarily unique GME curricula.

CONTINUING EDUCATION FOR HEALTH PROFESSIONALS

The USUHS Office of Continuing Education for Health Professionals (CHE) performs a significant role in facilitating the continued professional growth of health care professionals in the Uniformed Services. The principal responsibilities of the office are the identification of educational needs, planning, implementation, and the evaluation of continuing health professional education and resuscitative medicine programs for members of the health professions. CHE is also responsible for the acquisition and maintenance of USUHS CHE accreditation and of trauma and resuscitative medicine training program affiliations.

In carrying out its principal responsibilities in Fiscal Year 1996, CHE provided 107 accredited programs for continuing medical education (CME) with an attendance of 3,500 physicians. CHE provided 40 accredited nursing programs with an attendance of 3,031 nurses. Fifty-seven psychologists earned continuing education credit at five programs; one hundred and six members of the American College of Healthcare Executives earned continuing education credit at six programs. **Because the USUHS Office of CHE brings medical training to the medical health care professionals, cost-avoidance is generated for the Department of Defense by eliminating extensive travel expenses and time away from the hospitals and clinics.**

CHE Generated Cost-Avoidance for DoD

CHE has supported continuing medical education (CME) since 1980, continuing nursing education (CNE) since 1989, continuing education (CE) for psychologists since 1996, and pre-approved Category II (non-ACHE) continuing education for the American College of Healthcare Executives since 1996. Since 1990, the USUHS CHE has provided support for the DoD Video Endoscopy Courses. The USUHS-SOM Department of Surgery conducted these courses for the first few years, and was later joined by the USUHS-SOM Department of Obstetrics/Gynecology in 1993. The Tri-Service Video Endoscopy Course for Perioperative Nurses was added in 1994 at the USUHS campus, and was added in Fiscal Year 1996, off-campus, in both San Diego, California and San Antonio, Texas.

A conservative estimate of the total CHE-generated cost avoidance to DoD during Fiscal Year 1996 would be \$6 million. A specific example of Fiscal Year 1996 CHE generated cost avoidance is the USUHS SOM Department of Surgery's Video Endoscopy Program. Ten courses were offered during the past year: Advanced Laparoscopic Surgery - 6; Ultrasound for Surgeons - 2; Basic Laparoscopic Cholecystotomy - 1; and, Pediatric Laparoscopy - 1. **One hundred and twenty-two military and federal surgeons were trained in the USUHS video endoscopy courses at a cost avoidance for DoD in 1996, for tuition alone, of \$366,000.** The USUHS Department of Surgery also provides four Microvascular Courses per year with an average of 11 attendants per course. **A conservative estimate of the cost avoidance for DoD generated by the USUHS Microvascular Courses is at least 544,000 per year.**

Nineteen Medical Effects of Nuclear Medicine Courses were conducted by the Armed Forces Radiobiology Research Institute in Fiscal Year 1996 through the sponsorship of CHE. The U.S. Army (Landstuhl Regional Medical Center and the 18th Medical Command) and the U.S. Navy (western Pacific and Mediterranean Programs) realized significant cost savings by contracting with the USUHS Office of CHE for the coordination of programs on targeted issues for specific audiences near facilities in Germany; Korea; Yokosuka and Okinawa, Japan; Guam; Rota, Spain, Naples, Italy; and, Sigonella, Sicily.

In order to strengthen the Department of Defense initiatives for new health care systems and futuristic planning, CHE sponsored continuing education for two TRICARE Leaders' Conferences and the MHSS 2020 Symposium. The Federal Healthcare Providers Credentials Management Conference was also sponsored by CHE. The TRICARE European Region and TRICARE Region 9 (San Diego) held conferences at which CHE also provided continuing education for the attendees.

Another example of CHE support provided to the Department of Defense occurred when the Department of Family Medicine and the Office of CHE provided 19.5 hours of CME for 57 Air Force Reserve Fight Surgeons for the purpose of providing primary care perspectives for those specialty physicians whose active duty responsibilities will be carried out in primary care settings.

At the 102nd Annual Meeting of the Association of Military Surgeons of the United States (AMSUS), 184 sessions were approved for continuing education credit. CHE also sponsored the Family Medicine Department's 40-hour course to prepare over 100 Tri-Service physicians for board certification. And, one final example of cost-avoidance generated for the Nation occurred when the USUHS-SOM Department of Obstetrics and Gynecology and the USUHS Office of CHE provided continuing education in women's health issues for nurses at the U.S. Capitol, Office of the Attending Physician.

Military Training Network

The Military Training Network (MTN) is part of the USUHS CHE Directorate. The mission of the MTN is to develop and implement policy guidance and to ensure compliance with curriculum and administrative standards for resuscitative and trauma medicine training programs for uniformed services members and Department of Defense affiliates worldwide. The Tri-Service staff of the MTN provides service specific expertise, central record keeping, worldwide coordination of programs and ensures that national resuscitative and trauma medicine organizations are aware of the unique requirements of military medicine.

MTN sponsored resuscitative training programs meet the criteria established by the American Heart Association (AHA), the MTN, and the AHA National Faculty Members. Each National Faculty Member is appointed by his/her service specific Surgeon General and is responsible for worldwide MTN resuscitative training programs.

Preliminary Fiscal Year 1996 Resuscitative and Trauma Medicine Training Totals:

Basic Life Support Training Increased by 25%:

Providers - 210,994 trained worldwide
Instructors - 7,775 trained worldwide

Advanced Cardiac Life Support Training:

Providers - 6,971 trained worldwide
Instructors - 610 trained worldwide

Pediatric Advanced Life Support Training Increased by 40%:

Providers - 3,317 trained worldwide
Instructors - 389 trained worldwide

Advanced Trauma Life Support Training:

107 ATLS Courses provided
2,340 Providers and Instructors trained worldwide

Basic Emergency Medical Technician's Program Training Increased by 80%:

59 EMT Courses provided
5,299 U.S. Army personnel trained worldwide

Grand Total: **The Military Training Network coordinated the training of 237,695 health care professionals for resuscitative and medicine training** (this total will increase as the USUHS MTN continues to receive Fiscal Year 1996 fourth quarter reports from affiliated programs).

The USUHS MTN Support for Joint Training Opportunities:

- The 212th MASH held an MTN sponsored Trauma Nurse Core Course (TNCC) in Bosnia;
- The MTN sponsored an Advanced Burn Life Support Course in Bosnia;
- A joint training Trauma Nurse Core Course was conducted at Ramstein Air Force Base in Germany.

The MTN actively seeks to increase its DoD affiliations in order to generate additional cost avoidance and to ensure that all components of the Uniformed Services receive standardized resuscitative and trauma medicine training. **These training initiatives greatly enhance the Armed Forces' wartime medical readiness capability.**

USUHS BRIGADE COMMAND STRUCTURE

The USUHS Brigade Commander is recognized as the "senior active duty military officer" of the University. It is the responsibility of the Brigade Commander to ensure that the uniformed personnel assigned to the University adhere to the appropriate service specific standards set by their parent service. In addition, the Brigade Commander makes certain that the interests of the military members assigned to the University are addressed and that they remain competitive for promotion with their service peers. Under the leadership of the Brigade Commander, the uniformed students, faculty and staff assigned and reporting to the School of Medicine, the School of Nursing, or other University programs and divisions must participate in all activities and events as they would in any other command of the Uniformed Services. Regular formations are held; physical fitness exercises, standards, and testing are adhered to; performance evaluations are completed and rated; and, uniformed personnel are trained in the appropriate uniformed programs and customs.

During Fiscal Year 1996, the Brigade Command structure experienced a complete review. The Brigade Commander currently has a support structure similar to any other military unit in the Department of Defense with his subordinate Commanders specifically identified and all assigned support staffs designated with clear and concise roles.

There are currently three subordinate commanders who directly report to the Brigade Commander: the Commandant of the School of Medicine; the Commandant of the Graduate School of Nursing; and, the Commander of the Headquarters Company.

The Commandant of the School of Medicine has four additional commanders who are responsible for the students from each of the Uniformed Services assigned to the University: the Army, Navy, Air Force and the Public Health Service. In order to better assist the service specific commanders, a structure was put into place in the student companies to clearly delineate the chain of command, with the service commander at the top. Additionally, the restructuring effort recognized the need for four service specific Non-Commissioned Officers/Chief Petty Officers to act as Senior Enlisted Advisors and to assist the commander in the proper training of the medical students.

With the formal approval of the Graduate School of Nursing, the Commandant of the Graduate School of Nursing was also designated with the title of Company Commander, and organized the students of the school accordingly. The Brigade Senior Enlisted Advisor currently serves as the Graduate School of Nursing Senior Enlisted Advisor until a permanent position has been filled by the Air Force. With this solid command structure in place, the Commandant has the ability to accommodate the growth of the Graduate School of Nursing, while maintaining positive leadership.

The Headquarters Company was created with the Brigade Adjutant designated as the Headquarter Company Commander; the positions of Platoon/Flight Sergeants, Division Chief, and Squad Leaders were created to more effectively and efficiently utilize the enlisted personnel assigned to the University. Through the Headquarters Company, the enlisted community now has a recognized

structure with leadership opportunities similar to those offered during assignments with their parent services. Senior Non-Commissioned Officers are presented the opportunity to serve as mentors to the junior enlisted personnel at USUHS; and, the junior enlisted personnel receive the guidance necessary to develop and grow as professional Soldiers, Sailors or Airmen. In an official ceremony, the University President, the Deans of the School of Medicine and the Graduate School of Nursing, and the Brigade Commander formally recognized the new chain of command at all levels, from the Squad Leader to the Commandant. The total participation of the USUHS uniformed personnel in such a structure under the current Brigade Command, has served to enhance the unique experience of those students, faculty and staff who are assigned to an environment shared by the Uniformed Services.

V. THE UNIVERSITY'S EXPANDED MISSIONS

THE TRAUMATIC STRESS CENTER

Research and consultation in psychiatric responses to trauma and disasters is a major component of the mission of the Traumatic Stress Center. Consultation is active, ongoing and related to the collection of data and the development of recommendations for operational implementation. The Center maintains a database of over 9,000 articles on combat stress, trauma, disasters and human behavior in high stress environments. Consultation is established with both local commanders and headquarters elements. Teams are constituted from faculty at USUHS and affiliated teaching hospitals as well as local medical and health care personnel. On-site teams collect data and establish relationships to provide ongoing consultation to commanders and civilian leaders and to facilitate longitudinal follow-up after disasters and traumatic events.

In Fiscal Year 1996, the Traumatic Stress Center activities involved psychiatric consultation and the development of lessons learned in the following situations:

- Epidemiology and Research on Family Violence in the United States Army, 1995 - 2000;
- Consultation to former Yugoslavian (Zagreb) health care providers on post-traumatic stress, 1996;
- Consultation to the Department of Defense on Combat Stress in Bosnian deployed troops, 1995 - 1996;
- Advisory Group on Chemical and Bacteriologic Warfare Response Team (Commandant, United States Marine Corps), 1995 - 1996; and,
- Consultation to the National Transportation Safety Board after the ValueJet Florida crash, 1996.

THE CENTERS FOR PREVENTIVE MEDICINE AND PUBLIC HEALTH

The Centers for Preventive Medicine and Public Health (CPM/PH) is an entity within the USUHS-SOM Department of Preventive Medicine and Biometrics. The Centers operate under terms of a memorandum of understanding with the Henry M. Jackson Foundation for the Advancement of Military Medicine. The CPM/PH combines broad expertise in research, consultation, education, training, and clinical preventive medicine and public health, to develop data bases and analytic methodologies, prepare innovative curricula, and evaluate processes and outcomes in clinical practice.

The Centers serve program managers and policy makers in the Department of Defense, other federal agencies, local governments and private organizations concerned with health policies and service. The Centers coordinate the resources of multiple separate centers of excellence to ensure that the appropriate collective expertise is applied. The CPM/PH enhances the stability and long-term effectiveness of its parent organization by attracting, retaining, and providing for the professional growth of outstanding faculty and staff, by providing high quality educational experiences to its students, and by promoting excellence in clinical preventive medicine and public health. The following Centers have been established:

- Center for Health Care Quality Assessment and Improvement;
- Center for Landscape Epidemiology;
- Center for Foreign Area Medical Studies;
- Center for Health in Extreme Environments;
- Center for Training and Education in Addiction Medicine; and the
- Center for Environmental and Occupational Health.

On page 22, of the June 24, 1996 issue of **American Medical News**, it was pointed out that the American Society of Tropical Medicine and Hygiene sponsors the exam leading to a Certificate in Clinical Tropical Medicine and Travelers Health. Prerequisites for the certification are the completion of a society-approved course of study in tropical medicine and two months of overseas clinical experience. Only seven institutions currently are approved for the course work in tropical medicine, of which, USUHS is one. In order to maintain that status, the Department of Preventive Medicine and Biometrics must continue to expand its academic and research programs. This expansion is also needed to sustain the requirements of the graduate programs which provide research products of pertinence to the DoD.

Graduate and Continuing Education in Preventive Medicine: Public Health graduate education programs are offered through the USUHS-SOM Graduate Education Program. Some 226 individuals have graduated from the Master of Public Health (MPH) Program; The Master of Tropical Medicine and Hygiene (MTM&H) Program has graduated a total of 21 personnel. The SOM Department of Preventive Medicine and Biometrics has collaborative education agreements with the Walter Reed Army Medical Center Internal Medicine Fellowship Program, the Army Program in Health Services Administration, the Army/USPHS Laboratory Animal Medicine Program, the Navy Dental Research Institute and the Indian Health Service. The Department also offers residency training programs in occupational medicine and preventive medicine.

In response to the requests of the Services, the Tri-Service Advanced Military Tropical Medicine Course was first offered at USUHS during the summer of 1996. **Under the auspices of the USUHS-SOM Department of Preventive Medicine and Biometrics, DoD personnel will be educated and trained in tropical infectious diseases, which is part of medical readiness training for foreign military operations.** Also, a Health Service Administration track of the MPH degree was developed for commanders of military training facilities.

THE CASUALTY CARE RESEARCH CENTER

The Casualty Care Research Center (CCRC) was established in July 1989 under the USUHS-SOM Department of Military and Emergency Medicine as a center of excellence for injury control and casualty care research. In keeping with the overall mission of USUHS, the CCRC conducts research and investigations of issues relating to injury control, casualty care, operational and disaster medicine; provides medical students, graduate physicians and other uniformed medical personnel with a disciplined, educational, research experience in combat casualty care, injury epidemiology, trauma management, and related areas; maintains a strong collaborative relationship with other federal, state and local agencies which share common interests in casualty care and operational medicine; serves as a repository of resources and information relating to injury control, injury epidemiology and operational medicine for the Uniformed Services; and, provides research, resource and educational support, technical assistance, and other community service to USUHS, the Uniformed Services, and other federal, state, and local elements. The Center continues to operate entirely on extramural funding. Personnel within the USUHS Department of Military and Emergency Medicine participate in various activities of the CCRC based on their professional interests and as their teaching and clinical responsibilities permit. Twelve active research, development, training, and service programs are currently being conducted.

In July 1996, the President of USUHS received written confirmation of the successful relationship of the CCRC with the Bureau of Alcohol, Tobacco and Firearms, Department of the Treasury. The Chief of the Special Operations Division verified that his division's "Memorandum of Understanding with the CCRC has proven to be a venture in professionalism and friendship." The correspondence went on to state the following: "Coupled with exceptional medical support, the CCRC has also provided a number of agents with outstanding medical training, making it possible for a greater level of safety for the men and women in the field. **It is partnerships like this that make it possible for personnel to concentrate on the job at hand, knowing that the highly trained men and women of the CCRC are there for us if we need them.**"

The Wound Data and Munitions Effectiveness Team (Vietnam) database (WDMET) is maintained by the CCRC. It contains information on the tactical engagement, weapons employed, resulting injuries and treatment in the pre-hospital and hospital environments on approximately 8,000 combat casualties. It is the ONLY collection of its kind in the world. Photograph, medical records, X-rays, recovered bullets and fragments make this a unique resource.

An "Archives Plan" has been implemented in accordance with the CCRC strategic plan. The CCRC responded to more than 36 requests for archival and research support from the military services and other agencies during Fiscal Year 1996.

Since the Counter Narcotics Tactical Operations Medical Support (CONTOMS) program was initiated by the CCRC at the end of Fiscal Year 1990, over 426 agencies from 47 states have both participated and graduated personnel from this CCRC program. Under the Army's Advanced Technology Program, the Center has been involved in the exploration of telemedicine to deliver improved forward medical care. The CCRC has developed a training program, the telemedics course, to prepare military corpsmen/medics, physicians's assistants, and battalion and brigade physicians to effectively implement telemedicine. This development strategy is one of the few which focuses on extending the scope of practice for practitioners in the field, as compared to focusing on routine consultation. The CCRC has played a significant role in the implementation of telemedicine to support U.S. troops in Bosnia.

TELEMEDICINE/MEDICAL INFORMATICS

Simulation/Readiness Center (Just -In-Time Training)

During Fiscal Year 1996, USUHS coordinated with the Walter Reed Army Medical Center in order to establish the preliminary schematic designs for a Simulation Center. It is proposed that the Center will be utilized for the training of medical students and house staffs from the USUHS School of Medicine and the Graduate School of Nursing, the National Capital Region Military Medical Centers, and local Reserve/National Guard Medical Units. The site has been provided by the Walter Reed Army Medical Center at its Forest Glen Annex. The center will consist of a twelve-room clinical simulation area, a Computer Learning Center and a Surgical/Anesthesia Simulation Suite with a virtual reality application area. It will additionally incorporate a telemedicine conference room, a large classroom, and an administrative/support area. **A major goal is to develop a virtual reality surgical center and the ability to train medical personnel assigned to operational teams, since one of the primary missions of the Center will be to concentrate on continuing medical education and readiness training programs.** Current plans call for the development of just-in-time training modules for use with surgical teams and other medical units preparing for deployment. A subcommittee tasked with the development of equipment/technology specifications and proposals for the Center is being established.

Virtual Military Medical Reference Center

USUHS will continue its participation with the conceptualization and establishment of a virtual military medical reference center which was initiated in Fiscal Year 1996. The Office of the Secretary of the Navy has funded this project; conceptually, it will combine the technical expertise of experts who established the University of Iowa Virtual Hospital and the subject matter expertise of the USUHS faculty in order to create an Internet-based electronic reference system that will be housed in the Learning Resources Center (LRC) of USUHS. The Center will have access to the following: reference documents, regulations, and standard operating procedures of the military medical departments; standard medical references and databases; "hot-links" to on-line medical resources; continuing education opportunities; and, just in time training capabilities.

Medical Simulation and Training Software

Plans were initiated in Fiscal Year 1996 to fund the continued development of medical simulation and training software by the Office of the Assistant Secretary of Defense for Reserve Affairs. This work will be done in collaboration with the USUHS Offices of Educational Affairs, Teaching and Research Support, Academic Research, Continuing Health Professional Education, and the Jackson Foundation Center for Medical Education Technology. Not only will specific simulation scenarios be developed, but a software tool that will allow subject matter experts to create and maintain simulation programs will also be created. An additional software tool will be designed to provide a method of creating and monitoring on-line continuing education and readiness training programs. One of the specific subjects to be addressed by this effort in Fiscal Year 1997 will be the development of a training module on Biological and Chemical Warfare.

The World Wide Web and Continuing Medical Education

Nineteen Pathology cases on the World Wide Web were approved for continuing medical education by the USUHS Office of Continuing Education for Health Professionals; and, as a consequence, continuing medical education credit was earned by a rapidly increasing number of physicians during Fiscal Year 1996.

The Pathology Web Site, originally developed in Fiscal Year 1995, has been redesigned and has received positive feedback from the end-users, to include physicians assigned in Bosnia. New pathology cases will be added on a monthly basis to the web site due to the coordination of USUHS faculty and the SOM Pathology Department's clinical adjunct faculty who are primarily located at the Walter Reed Army Medical Center, the National Naval Medical Center, the Armed Forces Institute of Pathology and the Children's Hospital National Medical Center.

CLINICAL PSYCHOLOGY PH.D. PROGRAM

The USUHS SOM Department of Medical and Clinical Psychology reached a milestone in Fiscal Year 1996 when Army Major John E. Trakowski became the first uniformed officer to complete the doctoral program in Clinical Psychology.

USUHS was congressionally tasked on December 9, 1992, to establish a Ph.D. program in Clinical Psychology for the 1993-94 Academic Year. " The students are to be drawn from qualified applicants in the services and in the private sector." This program was initiated in the 1992 Academic Year with one student from the Army. Three additional officers entered the program in August 1993; the three Services each provided one officer for the entering class of August 1994; and, a class of two students entered the program in August 1995. Four military officers (two Army, one Air Force, and one Navy (**the first prior enlisted individual to enter the Clinical Psychology Program**)) were admitted during Academic Year 1996, for a total of twelve students. The Clinical Psychology Program emphasizes applying psychological theories and methods to a variety of physical and mental health problems, including stress, pain, disability prevention, anxiety disorders, obesity, behavioral factors in cardiovascular disease, stress and substance abuse, and gender differences in behavior and health. **Upon the completion of the program, graduates will be prepared to apply principles and techniques in clinical, organizational and health psychology to the unique operational and healthcare delivery challenges characteristic of the military.**

Courses in the Clinical Psychology Program are taught by the resident USUHS faculty, by over 20 members of the three Services who have received clinical faculty appointments at the USUHS-SOM, and by faculty from nearby medical schools and universities. **The program offers military unique courses such as Organizational/Industrial Military Psychology and Clinical Applications of Military Psychology as well as field experience in military clinical settings.** Memoranda of Agreement have been completed in order to establish clinical training sites at the Walter Reed Army Medical Center, the National Naval Medical Center and the Malcolm Grow Medical Center for the USUHS Clinical Psychology students. **There is no other program in the Nation that provides such training in Military Clinical Psychology.**

ARMED FORCES RADIOBIOLOGY RESEARCH INSTITUTE (AFRRI)

The Armed Forces Radiobiology Research Institute (AFRRI) is the principal Department of Defense (DoD) laboratory for investigations of the biological effects of ionizing radiation. The Tri-Service laboratory, on the campus of the National Naval Medical Center in Bethesda, Maryland, was chartered in 1961. In October 1993, the management of AFRRI was transferred from the Defense Nuclear Agency to USUHS. AFRRI employs about 170 military and civilian scientists, physicians, technicians, and support personnel. The Institute supports the research requirements of DoD components and collaborates with other government facilities, academic institutions, and civilian laboratories in the United States and other countries. The resulting findings have broad military and civilian applications.

Resources. The Institute's sources provide scientists with a variety of radiation, energies, doses, and dose rates. The AFRRI reactor and a cobalt-60 gamma irradiation facility are licensed by the Nuclear Regulatory Commission. In addition, there is a linear accelerator and an industrial x-ray machine. Research is conducted through mathematical and computer models, subcellular studies and laboratory animal investigations. The AFRRI facility is accredited by the American Association for the Accreditation of Laboratory Animal Care (AALAC).

Outreach. AFRRI disseminates its findings within the Department of Defense and to the international scientific community through articles in peer-reviewed journals, presentations at professional conferences, and reports and recommendations to the military services concerning mitigation of radiation hazards and optimized medical treatment of casualties. Research is shared with specific audiences through symposia, consensus conferences, publications, and an accredited course on the medical effects of ionizing radiation

AFRRI research focuses on methods to prevent, assess, and treat radiation injuries.

Prevention. Improved biomedical strategies will prevent the life-threatening and health-degrading effects of ionizing radiation by minimizing the damage from acute and chronic exposures. Researchers test promising pharmacological agents for the ability to increase survival and reduce long-term risks. They also seek to improve the protective capability of existing drugs and the method by which such drugs are administered.

Assessment. Advancements in biological dosimetry will make possible more accurate assessments of the radiation doses to which individuals may be exposed as a result of military or civilian activities. Efforts include the measurement of doses that are higher and lower than those that can be measured by present methods. Research encompasses the health hazards associated with exposure to ionizing radiation, both alone and when combined with exposure to other toxic agents. **Investigations include the health risks from chemicals and radioactive substances, such as depleted uranium shrapnel, that remain in the body. Findings will determine, for instance, recommended radiation exposure limits for battlefield scenarios.**

Treatment. The development of advanced treatment strategies will increase survival after exposure to radiation, including exposures that involve additional toxic agents as well as battlefield wounds. Initial protocols will include the stimulation of the production of blood-forming cells; later protocols will seek to improve the ability of multiple organ systems to recuperate.

1996 Independent Peer Review of the Scientific Program Areas.

In July 1996, the American Institute of Biological Sciences (AIBS) performed an independent peer review of the scientific program areas of AFRRI. The following findings were reported in the AIBS Executive Summary: "The program at AFRRI is mission driven, which is apparent in the focus and integration of the projects. **The military has a clear need for information on the sources and complicating effects of radiation in conflict, terrorist, and accident scenarios. Response and deployment decisions depend on information available only from test (i.e., experimental), theoretical and/or empirical (event-generated) data. The contribution of experimental data is enormous. AFRRI has had a significant role in providing information to devise strategies for early response to high level acute doses of irradiation...**

It was made clear that changing world conditions have posed new threats for which there are little or no data. This need for new data comes at a time when the scientific community's ability to respond has been severely restricted by worldwide closings of radiobiological research centers and by limited research funding. **AFRRI has value because it is designed and organized to generate these types of data, and because it is one of the very few places that can do so.**

AFRRI has always played a national and international role in solving radiobiological problems, interacting with NATO, sending response teams anywhere in the world where they are needed, and training physicians and military personnel to respond to radiation accidents. This role is expanding due to the default of other centers....AFRRI investigators have always shared their findings with the scientific community and have a long and impressive list of contributions. Their publications and attendance at scientific meetings allow feedback, peer review, and recruitment of other scientists to contribute independently to problem solution. These past

contributions have been in diverse areas such as hematology, management of infection, neurobiology, radioprotective drugs and high LET radiation. Most of these studies have involved relatively high radiation doses, because the military was then concerned with nuclear bombs. **The AFRRI investigators have been able to use this knowledge**, and the experimental approaches which allowed its development, **to design reasonable and logical approaches to the extremely difficult problems of current interest which involve low doses and possible low dose rates**. The speed with which they have done this, and have obtained some preliminary data, is impressive and speaks favorably of the organization, experience and dedication of the Institute's staff' (AIBS Peer Review to USAMRMC, Armed Forces Radiobiology Research Program, July 29-31, 1996, Bethesda, Maryland, Executive Summary).

During Fiscal Year 1996, AFRRI sponsored two significant workshops with specific military objectives. The first consisted of a panel of DoD experts that examined the medical readiness issues related to ionizing radiation. The workshop produced a new section to the Medical Readiness Strategic Plan approved by the Assistant Secretary of Defense for Health Affairs. The second, held on 25-27 September, was a workshop on the Triage of Irradiated Personnel. Participants included both civilian and military scientists, physicians, and medical planners. The workshop examined and updated military triage philosophy for radiation injuries.

VI. The Closure Issue

On May 15, 1996, while the House of Representatives was considering the Defense Authorization Bill for Fiscal Year 1997, Amendment No. 14 was introduced. This amendment recommended the closure of the University. Following intensive support from the American Medical Association, the Association of American Medical Colleges, the American Legion, the Military Coalition, and the National Association for Uniformed Services, **the House membership strongly endorsed the continuation of the Uniformed Services University of the Health Sciences (USUHS) with a vote of 343 to 82.**

Following a review of the written statements of support from both military and civilian medical entities and associations, four **determinations were concluded by the House of Representatives and the Senate which resulted in Public Law 104-201 and Public Law 104-208 which prohibit the closure of the University. The four determining factors were:** 1) the practice of civilian and military medicine are not the same; 2) USUHS provides unique military training not found at other medical schools; 3) outcomes evaluations rank USUHS School of Medicine graduates at a high performance level; and, 4) the cost-effectiveness of USUHS has been substantiated.

1) The Practice of Civilian and Military Medicine Are Not the Same

The Military Medical System is a complex organization with enormously challenging missions and requirements. It is directly due to this complexity that medicine, as practiced in civilian settings, is not the same as medicine practiced in the military.

Armed forces physicians, survivors of military combat, and advocates of military medicine generally recognize that there is a body of knowledge unique to the medical problems and the special needs of military medical practice. During deployments, the forces encounter the effects of modern weapons, the stress of continuous operations, and the noise, toxins, and other hazards of the operational environment. The military physician must deal with the realities of risk assessment, prevention, medical evacuation, and the clinical management of the resulting diseases and injuries. In garrison, the military physician must display a solid understanding of the social and occupational milieu in which his patients must work, to include determining both long and short term fitness for duty, dealing with the unique family stresses of the military environment and also with the legal and regulatory systems that support the military environment. **These requirements do not occur in the civilian setting.**

In addition to being competent in general medicine, the military physician must have skills and knowledge in preventive medicine, combat medicine, behavioral sciences, environmental medicine, and tropical infectious diseases. **The military physician must be able to move comfortably between fixed and deployed medical facilities and provide medical care in both.** At least three other categories of basic knowledge are essential to military leadership and military medical readiness: knowledge of operational environments, military operations, and military organizational structure.

The military medical system has two principal objectives. In peacetime, it maintains military forces fit to fight. In combat, it conserves the fighting strength through counter measures directed at the prevention of disease and injury and through treatment at the lowest possible echelon of care, with a view toward rapid return to duty of sick or injured individuals. Attainment of these objectives or special needs requires special military and medical training for medical personnel, and special medical organizations able to accompany and support military units as they carry out their missions.

2) USUHS Provides Unique Military Training Not Found at Other Medical Schools

The American Medical Association (AMA) recognizes that there are special needs required by military medicine that do not exist in the civilian sector. On June 18, 1996, the AMA pointed out that USUHS provides ... "courses in combat casualty care, tropical medicine, combat stress, disaster medicine, and medical responses to terrorism---**courses not available through civilian medical schools.**" In addition, the 1996 AMA Policy Compendium reconfirms the American Medical Association's recognition of the unique educational experience provided only at USUHS: "The AMA vigorously supports the continuance of the Uniformed Services University of the Health Sciences as vital to the continued strength, morale, and operational readiness of the military services (Sub.Res.306,I-93)."

The military unique curriculum at the USUHS School of Medicine (SOM) and the integration of militarily-relevant material into the traditional medical school subject areas combine to produce a fully accredited four-year program leading to the M.D. degree. The USUHS-SOM curriculum requires 174 scheduled weeks, which is about 20 weeks longer than the average length for other U.S. medical schools. The traditional medical school curriculum is complemented by instruction in military medical subjects and by required participation in a variety of practical military experiences. The USUHS curriculum provides experience in emergency medicine and trauma care and the military aspects of preventive medicine, public health, behavioral medicine, plus military medical leadership. The sum of the USUHS military unique training is "approximately between 784 and 889 hours of initial military education and medical readiness training compared to that provided to the Scholarship graduates whose training ranges from 50 to 132 hours, depending on the Service" (General Accounting Office Report, "Military Physicians - DoD's Medical School and Scholarship Program," September 29, 1995, page 41).

The curriculum at the USUHS-SOM, by virtue of both: 1) the inclusion of specific military medical courses; and, 2) the integration of militarily -relevant subject material into practically every course, produces military medical officer graduates who are better experienced than their peers from other U.S. medical schools to more readily assume division, wing, and task group medical command and staff responsibilities in the combat medical support organizations of the military departments.

3) Outcomes Evaluations Rank USUHS Graduates at a High Performance Level

The General Accounting Office (GAO) in its report of September 1995 confirms that USUHS graduates have met the original intent of the establishing legislation which recognized the need for military physicians to provide continuity, leadership and experience in order to meet the special needs of military medicine. **"Forty-three (out of 44) commanders of major military medical units perceived that physicians from the University have a greater overall understanding of the military, greater commitment to the military, better preparation for operational assignments, and better preparation for leadership roles."** They also said that they **"perceive that University graduates have a better appreciation of and greater satisfaction with the physician's role within the military"** (GAO Report, "Military Physicians - DoD's Medical School and Scholarship Program," September 29, 1995, page 43).

The extensive, military unique training at USUHS has been described as essential by the former Surgeons General. USUHS physicians were assigned to the Gulf and Somalia; their high level of performance and deployability due to the USUHS educational programs was validated during Senate hearings in March and April of 1994. During those hearings, it was pointed out that: the USUHS graduates were immediately deployable to combat areas and were able to utilize their military combat, field sanitation, and preventive medicine training during Operations Desert Shield and Desert Storm; USUHS graduates volunteered for service with forward combat units, such as Special Forces Units; USUHS graduates understood the mission of their units and were able to quickly adapt to the lack of modern conveniences, equipment and military life in the field; USUHS graduates understood and successfully coordinated, in the joint service environment, with the organization of medical systems within the three Services; USUHS graduates were able to develop training programs in unconventional warfare, such as chemical and biological threats which increased confidence and decreased anxiety in their troops; and, USUHS graduates provided continuity, leadership and experience due to their extensive military training and retention rates.

4) The Cost-Effectiveness of USUHS

A comparison of the cost of the USUHS graduate to the federal government with the cost of the scholarship (HPSP) graduate, shows that the USUHS is a cost-effective source of physicians for the Nation. The General Accounting Office submitted its report on USUHS in September of 1995. Substantiated in that GAO report was the cost-effectiveness of USUHS: **"University costs are comparable to scholarship costs based on expected years of service and all federal costs. University graduates are expected to serve for about 18.5 years, on average, resulting in a per year federal cost of about \$181,575. Regular scholarship program physicians, expected to serve for 9.8 years, on average, have an annual federal cost of about \$181,169"** (GAO Report, "Military Physicians - DoD's Medical School and Scholarship Program," September 29, 1995, page 7).

"In addition, to help meet standards required for accreditation (and to meet the needs of the Department of Defense) as an academic institution, the University provides education and training for other health care and related professions and engages in research, consultation, and archival activities. These activities, which do not directly contribute to the education of military physicians, involve University faculty and staff. University officials believe that DoD would continue to conduct these activities even if the University is closed and estimated their value to be about \$18.6 million" (GAO Report, "Military Physicians - DoD's Medical School and Scholarship Program," September 29, 1995, page 4).

In Summary, the USUHS-SOM curriculum includes not only the content required for accreditation at all U.S. medical schools, but also unique courses and experiences with topical emphasis, teaching examples, and cases not found in other schools of medicine. However, the unique aspect of USUHS is not just the curriculum, but the total educational and acculturation environment that has been developed to produce career oriented military medical officers with a knowledge base, skills, and attitudes that cannot be obtained through short courses or episodic medical readiness training and who are prepared to work effectively in the joint military operational environment of the future. It is also substantiated by the AMA that **this special educational experience cannot be provided by any other combination of existing civilian medical schools with the military medical training courses currently available**. Based upon these facts, the House of Representatives and the Senate passed legislation for Fiscal Year 1997 that ensures the continuation of the Uniformed Services University of the Health Sciences. As evidenced by the following quotation, Public Law 104-201 specifically prohibits closure and clearly states Congress' recognition of the requirement for USUHS to continue as the academic center for military medicine:

"CODIFICATION OF REQUIREMENTS RELATING TO THE CONTINUED OPERATION OF THE UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES....

CLOSURE PROHIBITED. - THE UNIVERSITY MAY NOT BE CLOSED.

PERSONNEL STRENGTH. - DURING THE FIVE-YEAR PERIOD BEGINNING ON OCTOBER 1, 1996, THE PERSONNEL STAFFING LEVELS FOR THE UNIVERSITY MAY NOT BE REDUCED BELOW THE PERSONNEL STAFFING LEVELS FOR THE UNIVERSITY AS OF OCTOBER 1, 1993."

- Public Law 104-201, September 23, 1996, National Defense Authorization Act, Fiscal Year 1997, Section 907

VII. THE FUTURE

Nations throughout the World recognize that Military Medical Schools are essential. As a result, such institutions have been established and resourced on a world-wide basis. Some examples of Nations that support at least one Military School of Medicine are as follows: Algeria, Belgium, Bulgaria, France, Germany, Greece, India, Indonesia, Iran, Italy, Japan, Korea, Mexico, Pakistan, the People's Republic of China, Poland, Russia, South Africa, Taiwan, and Turkey. USUHS, as the only Federal Medical School in the United States, has established Memoranda of Understanding with many of these schools. During Fiscal Year 1996, representatives from the Medical Schools of France, Japan, Mexico, the People's Republic of China, Poland, and Russia visited the USUHS. During these visits medical, instructional, and administrative information was exchanged. USUHS students and faculty were able to both share their experiences and to learn from these exceptional visits. There is no doubt that such academic exchanges will continue throughout the coming years to the benefit of military medicine throughout the World. USUHS will continue to learn from those who have established their institutions over 100 years ago and at the same time, the University will be able to assist other Nations through its telemedicine endeavors and its superb military operational training programs.

USUHS now has two accredited schools ... the School of Medicine and the Graduate School of Nursing ... The University has expanded its Graduate Education, Graduate Medical Education and Continuing Professional Education Programs in order to better serve the needs of the Uniformed Services and the Nation.. ..The Centers for Traumatic Stress, Preventive Medicine and Public Health and Casualty Care Research continue to provide consultation and support as required by the Uniformed Services ... The USUHS SOM and GSN research communities continue to publish and patent militarily relevant research that will benefit future members of the Armed Forces..and, the USUHS active duty graduates continue to be rated by their commanders as qualified, dedicated, deployable medical officers with proven leadership potential.

On February 16, 1996, Navy Ensign Michail Charissis, a second-year medical student at USUHS, was a passenger on the Maryland Rail Commuter that collided with an Amtrak train. Ensign Charissis, 23, had the opportunity to escape from the back of the car to immediate safety, but instead he returned to the front of the (second) car to assist a fellow passenger. All this while, the first car of the train was being consumed in flames. That passenger, Ms. Geraldine Dykes, of Laurel, Maryland, was seriously injured and, like Charissis, had also lost her glasses during the crash. Charissis managed with great difficulty to get the train's emergency window open and to get Ms. Dykes to rescuers on the ground. He then joined in the process of providing medical aid and comfort to the injured passengers. Once all possible aid had been provided, Ensign Charissis quietly left the scene. It was only after much investigation that the hero of the Amtrak train crash was discovered by the press and the Navy to be Ensign Charissis. Following these events, Navy Secretary John Dalton presented the Navy Marine Corps Medal to Ensign Charissis at the USUHS campus on April 26, 1996. That award is one of the Navy's highest non-combat medals that can be awarded to an individual for an act of heroism involving lifesaving, or attempted lifesaving, while placing his/her life at risk.

What is the future of USUHS? With students like Ensign Chariss is... and those USUHS Alumni whom the Surgeons General pointed out during Congressional testimony in 1994 when describing the superb performance, dedication and deployability of USUHS graduates during Operations Desert Shield and Storm or, those USUHS graduates who are meeting the special needs of military medicine as documented by 43 military commanders in 1995 when questioned by the General Accounting Office staff.... or the four USUHS graduates who are directly serving the President of the United States on his White House and Helicopter Staff during the 1996-97 timeframe ... or, the Graduate School of Nursing Graduates who are currently being rated by their commanders with an average of 6.85 on a rating scale of 7.... the future of USUHS is a positive one that will expand as the military readiness requirements of the Uniformed Services continue to be met by the Graduates, Faculty, Students and Staff of this Nation's only Uniformed University.

This annual Reference/Historical Document concludes with an acknowledgement of the support of Congress and of the civilian and military associations during this complex era of restructuring in the Armed Forces. The University remains committed to meeting the special needs of military medicine and to providing uniformed medical officers who, in turn, will provide continuity and leadership for uniformed medicine into the 21st Century.

For further information regarding this document contact the USUHS Office of the Vice President for Administration and Management (301-295-1956).